A5200-1.1U 4/90

INSURANCE COLLISION REPORT

R-89-2

Passenger Vehicles, Vans,
Pickups, and Utility Vehicles

Highway Loss Data Institute

Insurance Collision Report
HLDI R89-2

Passenger Cars, Vans, Pickups, and Utility Vehicles

1989 Models During Their First Year
1988 Models During Their First Two Years
1987 Models During Their First Three Years

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Highway Loss Data Institute – 1005 North Glebe Road, Arlington, Virginia, 22201
Research Report HLDI R89-2; December 1989
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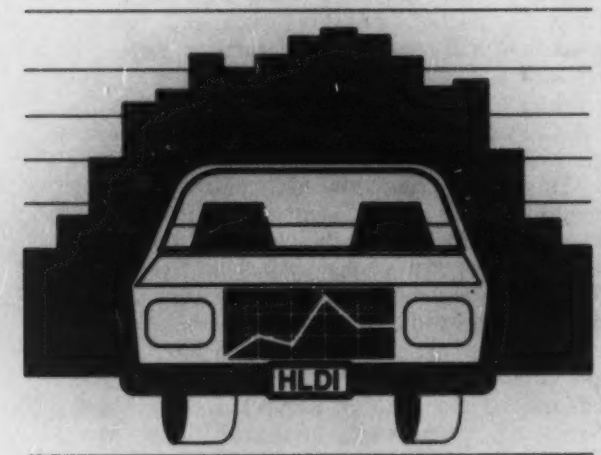


SUMMARY

This Highway Loss Data Institute report describes variations in both the frequency and the size of collision coverage claims for damage to 1987, 1988, and 1989 model year passenger cars, and for vans, pickups, and utility vehicles.

Passenger Cars

- Among 1989 passenger vehicles, the Plymouth Grand Voyager had the best overall collision coverage result (average loss payment per insured vehicle year) and the Mercedes 300SE had the worst.
- Nearly all of the models with the best results were large or midsize domestic vehicles; many of them were station wagons or passenger vans.
- Nearly all of the models with the worst results were small or midsize imported vehicles; most of them were sports or specialty vehicles.
- Collision coverage results continue to show substantial variations among vehicles grouped by size and body style. In many cases, the best and worst results for cars of the same size and body style vary by a factor of two or more.
- Claim frequencies, average loss payments per claim, and average loss payments per insured vehicle year generally decreased with increasing vehicle size in all body style groups.

Vans, Pickups, Utility Vehicles

- Among all vans, pickups, and utility vehicles, vans and large utility vehicles had the lowest average loss payments per insured vehicle year; small utility vehicles and small pickups had the highest.
- For the 1989 model year, the Nissan Standard Bed and Toyota Standard Bed 4x4 (both small pickups) had the highest average loss payments per insured vehicle year, and the Ford F-150 Super Cab 4X4 and GMC 1500 Extended Cab (both standard pickups) had the lowest.
- For pickups and utility vehicles, results were clearly related to vehicle size with smaller vehicles having higher average loss payments per insured vehicle year than larger vehicles.
- For each of the three model years, small, intermediate, and large utility vehicles generally had similar claim frequencies, but the average loss payments per claim decreased with increasing vehicle size.
- For all three model years, small pickups and standard pickups had similar average loss payments per claim, but the small pickups had substantially higher claim frequencies.

Introduction

The Highway Loss Data Institute (HLDI) -- a nonprofit, public service organization -- gathers, processes, and summarizes insurance data. Its research addresses the human and economic losses resulting from owning and operating motor vehicles, especially the ways such losses vary among different kinds of vehicles.

This report describes the collision coverage results of 1989 models during their first year of availability, 1988 models during their first two years, and 1987 models during their first three years. Results are presented for passenger cars, and for vans, pickups, and utility vehicles.*

This report is based on collision coverage and loss data supplied by 12 insurers: Aetna, Allstate, Fireman's Fund, GEICO, Kemper, Liberty Mutual, Nationwide, Prudential, Safeco, State Farm, Travelers, and USAA. Detailed explanations of data sources and methods of analysis are given in HLDI Report R89-1. A complete list of the vehicle classifications by make, series, body style, and size class is given in Appendix A-1 for passenger cars and Appendix A-2 for vans, pickups, and utility vehicles; definitions are given in Appendix B.

Results and Discussion

The results in this report are presented in two sections. The first section summarizes variations in both the frequency and the size of collision claims for damage to private passenger cars from three model years: 1989 models during their first year of availability, 1988 models during their first two years, and 1987 models during their first three years. The second section contains similar summaries for vans, pickups, and utility vehicles insured under noncommercial collision coverages.

The results were standardized to minimize differences that might be attributable to variations in the mix of deductible amounts and operator age groups among different vehicles. Both the frequency and average size of collision coverage losses vary with the deductible amount and the age group of the operators. Standardizing these two nonvehicle factors ensures that their mix is the same for each result. Therefore, to the extent that the distributions of age within each operator age group and amounts within each deductible group do not vary substantially for different vehicles, these effects cannot bias comparisons among the various results. Other nonvehicle factors have not necessarily been eliminated from the results presented in this report.

All of the results are shown in relative terms, with 100 representing the average for all passenger cars of each model year. Thus, for example, the relative average loss payment per insured vehicle year of 46 for the Plymouth Grand Voyager (Table 1) indicates a result that is 54 percent below the result for all 1989 model year passenger cars combined; the Mercedes 300SE result of 235 indicates that its average loss payment per insured vehicle year was more than two and one-third times the result for all 1989 passenger cars. The results for vans, pickups, and utility vehicles are also shown relative to the all-passenger-car results for each model year.

Passenger Cars

The results for passenger cars are presented by body style within each of three vehicle size categories -- small, midsize, and large. A full description of the HLDI system for classification of passenger cars by body style and size is given in Appendix B. The results for the 1989 model year passenger cars are based on approximately 1.2 million insured vehicle years of exposure, those for the 1988 models on approximately 5.2 million insured vehicle years, and those for the 1987 models on approximately 9.6 million insured vehicle years. Results are not given for any individual vehicle series with less than 1,000 insured vehicle years of exposure. Thus, this report may not include some 1989 models that in previous model years had particularly good or poor collision coverage results. Generally, the greater the exposure associated with a result, the more confidence can be placed in the result.

1989 Models During Their First Year

Table 1 summarizes the 1989 model year passenger cars with the lowest and highest relative average loss payments per insured vehicle year during their first year of availability. The average loss payment per insured vehicle year combines claim frequency and average loss payment per claim and thus accounts for not only how often collision claims are made but also the magnitude of such

* A separate, supplemental volume to this report, Appendices to R89-2, is available upon request. It contains detailed claim frequency and average loss payment per claim results for two classes of deductibles and for youthful and no youthful operators. The supplement also provides separate, detailed results by year of availability for 1987 and 1988 models.

Table 1
Relative Average Loss Payments Per Insured Vehicle Year for 1989 Model Year Passenger Cars With the Best and Worst Collision Coverage Results*

Best Results				Worst Results			
Make/Series	Body Style	Size	Result	Make/Series	Body Style	Size	Result
Plymouth Grand Voyager	P.V.	Large	46	Mercedes 300SE	Sp.	Large	235
Dodge Caravan	P.V.	Large	48	BMW 325i/iS 2D	Sp.	Midsize	217
Chevrolet Caprice	S.W.	Large	48	BMW 325i Conv.	Sp.	Midsize	200
Chevrolet Astro Van	P.V.	Large	49	BMW 325i 4D	Sp.	Midsize	190
Buick Century	Sp.	Midsize	49	Ford Mustang	Sp.	Midsize	182
Chevrolet Caprice	4Dr.	Large	50	BMW 500 Series	Sp.	Midsize	180
Dodge Spirit	4Dr.	Midsize	51	Nissan 240SX	2Dr.	Small	169
Dodge Grand Caravan	P.V.	Large	52	Pontiac Lemans	2Dr.	Small	168
Plymouth Acclaim	4Dr.	Midsize	52	Saab 900	2Dr.	Small	167
Ford Extended Aerostar	P.V.	Small	53	Lincoln Mark VII	Sp.	Midsize	162
Oldsmobile Cutlass Ciera	S.W.	Midsize	53	Mercedes SEL Series	Sp.	Large	160
Ford Crown Victoria	4Dr.	Large	55	Chevrolet Corvette	Sp.	Small	158
Ford Aerostar	P.V.	Large	59	Honda Civic CRX	Sp.	Small	156
Plymouth Voyager	P.V.	Large	60	Nissan Sentra	2Dr.	Small	155
Plymouth Reliant	4Dr.	Midsize	60	Geo Metro	2Dr.	Small	154
Dodge Dynasty	4Dr.	Midsize	60	Dodge Daytona	2Dr.	Small	154

P.V. = Passenger Van; S.W. = Station Wagon; Sp. = Sports or Specialty
* 100 represents the average for all 1989 passenger cars ($214.7)

claims. The vehicles listed in Table 1 were taken from the 159 individual 1989 vehicle series that had more than 1,000 insured vehicle years of exposure. The standardized results for all 1989 vehicles combined were 9.6 for claim frequency, $2,244 for average loss payment per claim, and $215 for average loss payment per insured vehicle year.

Over half the list of 16 vehicles with the best overall collision coverage results were large domestic models; the majority of these were passenger vans. The Plymouth Grand Voyager (46) had the lowest average loss payment per insured vehicle year, and four other models also had a result less than half the 1989 all-passenger-car result. There were six midsize series, all four-door models or station wagons, among the vehicles with the best results. No small vehicles were listed, nor were any two-door models or sports or specialty models.

As was the case with last year's collision report (*R88-2*), imported models dominated the list of vehicles with the worst overall collision coverage results; 11 of 16 were imported vehicles. Also, like last year's results, the 16 vehicle series represent a mixture of small, midsize, and large models (eight small, six midsize, and two large). Ten of the 16 listed vehicles were sports or specialty models; the other six were small two-door models. The Mercedes 300SE (235) headed this list with a value more than two and one-third times the 1989 all-passenger-car result. The two-door BMW 325i and its convertible model also had results at least two times the 1989 model year average.

Detailed collision coverage results for all 1989 model year passenger cars with at least 1,000 insured vehicle years of exposure are given in Table 4 (page 7). The values displayed are total exposure, measured in insured vehicle years, and relative values for three loss categories -- claim frequency per 100 insured vehicle years, average loss payment per claim, and average loss payment per insured vehicle year. The value 100 corresponds to the average result for all passenger cars in each loss category. The individual series are listed in ascending sequence of the relative average loss payment per insured vehicle year within each size and body style subgroup.

The Nissan Pulsar (162) had the highest relative claim frequency and the four-door Chrysler New Yorker 5th Avenue (58) had the lowest. The Mercedes 300SE (263) had the highest average loss payment per claim ($5,902), and the Mercedes SEL series (198), consisting of the 420 SEL, 500 SEL,

and 560 SEL, had the second highest ($4,446). The Chevrolet Astro Van (57) and Plymouth Grand Voyager (59), both large passenger vans, had the two lowest average loss payments per claim ($1,279 and $1,324, respectively).

As has been the case in previous years, Table 4 shows the collision coverage results for 1989 models continue to exhibit substantial variations among vehicles grouped by size and body style. In many cases, the best and worst results for cars of the same size and body style vary by a factor of two or more.

Table 4 also shows that claim frequencies, average loss payments per claim, and average loss payments per insured vehicle year generally decreased with increasing vehicle size in each body style group. For example, two-door vehicles as a group had the following relative claim frequencies for the three size classes: small (124), midsize (108), and large (92).

1988 Models During Their First Two Years

Table 2 summarizes the best and worst collision coverage results for 1988 model year passenger cars during their first two years of availability. The vehicles listed in Table 2 were taken from the 268 individual 1988 vehicle series that had more than 1,000 insured vehicle years of exposure. The standardized results for all 1988 vehicles combined for both years of availability were 9.7 for claim frequency, $2,164 for average loss payment per claim, and $211 for average loss payment per insured vehicle year.

Most of the 1988 vehicles with the best results were domestic models and most are classified as large vehicles. Fourteen of the 17 vehicles with the best collision results were station wagons or passenger vans. The American Eagle station wagon (42), GMC Safari Van (49), and Chevrolet Astro Van (50) led the list with results half or less than half the 1988 all-passenger-car result. Two versions of the Chevrolet Caprice, as well as both versions of the Dodge Caravan and Plymouth Voyager, were listed among the vehicles having the best results. Two small station wagons, the Nissan Stanza and Honda Civic, also made this list.

All of the 1988 vehicles with the worst overall collision losses were imported two-door or sports or specialty models, including five BMW vehicle series. Of the 17 vehicles with the worst results, eight are classified as small cars, six as midsize, and three as large cars. The BMW M3 (481) had the highest average loss payment per insured vehicle year. The Plymouth Conquest (351), Mitsubishi Starion (342), BMW 735/750iL (289), Porsche 944 Coupe (278), and Volkswagen Scirocco (268) also had overall collision losses that were more than two and one-half times the 1988 all-passenger-car result.

Table 2
Relative Average Loss Payments Per Insured Vehicle Year for 1988 Model Year Passenger Cars With the Best and Worst Collision Coverage Results*

Best Results				Worst Results			
Make/Series	Body Style	Size	Result	Make/Series	Body Style	Size	Result
American Eagle	S.W.	Midsize	42	BMW M3	Sp.	Midsize	481
GMC Safari Van	P.V.	Large	49	Plymouth Conquest	2Dr.	Small	351
Chevrolet Astro Van	P.V.	Large	50	Mitsubishi Starion	2Dr.	Small	342
Dodge Grand Caravan	P.V.	Large	51	BMW 735/750iL	Sp.	Large	289
Plymouth Grand Voyager	P.V.	Large	51	Porsche 944 Coupe	Sp.	Small	278
Dodge Caravan	P.V.	Large	52	Volkswagen Scirocco	2Dr.	Small	268
Pontiac Safari Wagon	S.W.	Large	53	BMW 325 4D	Sp.	Midsize	249
Plymouth Voyager	P.V.	Large	53	Jaguar XJ-S	Sp.	Midsize	239
Oldsmobile Custom Cruiser	S.W.	Large	54	Porsche 911 Targa/Cabriolet	Sp.	Small	213
Dodge Dynasty	4Dr.	Midsize	54	Mitsubishi Cordia	2Dr.	Small	207
Nissan Stanza	S.W.	Small	56	Mercedes 300SE	Sp.	Large	194
Chevrolet Caprice	4Dr.	Large	58	BMW 325 2D	Sp.	Midsize	192
Plymouth Gran Fury	4Dr.	Large	58	Toyota Supra	Sp.	Midsize	191
Honda Civic	S.W.	Small	61	BMW 735i	Sp.	Large	187
Ford Aerostar	P.V.	Large	62	Audi 80/90 Quattro	Sp.	Midsize	185
Dodge Aries	S.W.	Midsize	62	Saab 900 Conv.	Sp.	Small	185
Chevrolet Caprice	S.W.	Large	62	Saab 900	2Dr.	Small	184

P.V. = Passenger Van; S.W. = Station Wagon; Sp. = Sports or Specialty
* 100 represents the average for all 1988 passenger cars ($210.6)

Table 3
Relative Average Loss Payments Per Insured Vehicle Year for 1987 Model Year Passenger Cars With the Best and Worst Collision Coverage Results*

Best Results				Worst Results			
Make/Series	Body Style	Size	Result	Make/Series	Body Style	Size	Result
Ford Crown Victoria	2Dr.	Large	51	Mercedes 560SEC	Sp.	Large	279
Chevrolet Caprice	2Dr.	Large	51	Mitsubishi Starion	2Dr.	Small	275
GMC Safari Van	P.V.	Large	52	Alfa Romeo Milano	4Dr.	Small	269
Chevrolet Astro Van	P.V.	Large	53	Volkswagen Scirocco	2Dr.	Small	262
Ford Crown Victoria	4Dr.	Large	56	BMW 635CSi/L6	Sp.	Midsize	248
Plymouth Voyager	P.V.	Large	56	Plymouth Conquest	2Dr.	Small	246
Chevrolet Caprice	4Dr.	Large	56	Porsche 944 Coupe	Sp.	Small	243
Dodge Caravan	P.V.	Large	58	Audi GT Coupe	2Dr.	Midsize	230
Dodge Diplomat	4Dr.	Large	59	Porsche 928 Coupe	Sp.	Small	230
Pontiac Safari Wagon	S.W.	Large	59	BMW 325 2D	Sp.	Midsize	210
Mercury Grand Marquis	4Dr.	Large	60	Mitsubishi Cordia	2Dr.	Small	200
Ford Aerostar	P.V.	Large	61	Audi 5000 Quattro 4D	Sp.	Midsize	195
Buick LeSabre	S.W.	Large	62	Audi 4000	4Dr.	Midsize	194
Mercury Lynx	S.W.	Small	63	Chevrolet Corvette Conv.	Sp.	Small	191
Mercury Grand Marquis	S.W.	Large	63	Cadillac Allante Conv.	Sp.	Small	189
Ford Crown Victoria	S.W.	Large	63	BMW 325i Conv.	Sp.	Midsize	188
Ford Tempo 4WD	4Dr.	Midsize	64	Porsche 924 Coupe	Sp.	Small	186
Oldsmobile Cutlass	4Dr.	Midsize	65	Audi 4000 Quattro	Sp.	Small	183
American Eagle	S.W.	Midsize	65	Porsche 911 Coupe	Sp.	Small	180

P.V. = Passenger Van; S.W. = Station Wagon; Sp. = Sports or Specialty
* 100 represents the average for all 1987 passenger cars ($198.9)

Detailed collision coverage results for all 1988 vehicle series with at least 1,000 insured vehicle years of exposure are given in Table 5 (page 12). The results displayed are the combined results for the first two years of the 1988 models and are presented by vehicle size group and body style subgroups.

The Mitsubishi Starion (226) and Plymouth Conquest (198) had the two highest claim frequencies among the 1988 passenger cars. The American Eagle station wagon (52) had the lowest claim frequency. The BMW M3 (380) had the highest average loss payment per claim ($8,223) among the 1988 passenger cars, and the Chevrolet Astro Van (63) and GMC Safari Van (63) had the lowest ($1,363).

The results for 1988 models are similar to those for the 1989 models. For both model years, vehicles with the best results are often separated from those with the worst results within the same body style and car size group by a factor of two or more, and collision loss results tend to decrease with increasing vehicle size for each of the body style groups.

1987 Models During Their First Three Years

Table 3 summarizes the 1987 model year passenger cars with the best and worst collision coverage results during their first three years of availability. The vehicles listed in Table 3 were taken from the 277 individual 1987 vehicle series that had more than 1,000 insured vehicle years of exposure. The standardized results for all 1987 vehicles combined for all three years of availability were 9.6 for claim frequency, $2,074 for average loss payment per claim, and $199 for average loss payment per insured vehicle year.

All of the 1987 vehicles with the best average loss payments per insured vehicle year were domestic models and most were large models. The two-door models of the Ford Crown Victoria (51) and Chevrolet Caprice (51) had the lowest results among the 1987 passenger cars. Both four-door and station wagon versions of the Ford Crown Victoria and Mercury Grand Marquis were included among the 1987 model vehicles having the best results. The Mercury Lynx station wagon was the only small

vehicle included among the models with the lowest results for 1987 passenger vehicles.

All of the 1987 vehicles, except the Chevrolet Corvette convertible and Cadillac Allante, listed as having the worst average loss payments per insured vehicle year were imported models. Most of the cars with the worst results were small two-door or sports or specialty models and all but one of the vehicles are classified as small or midsize cars. The Mercedes 560 SEC (279) had the highest average loss payment per insured vehicle year. Eleven vehicle series had collision losses that exceeded the 1987 all-passenger-car result by a factor of two or more.

Detailed collision coverage results for all 1987 series with at least 1,000 insured vehicle years of exposure are given in Table 6 (page 19). The results are the combined results of the first three years for the 1987 models.

Among the 1987 passenger cars, the small two-door Mitsubishi Starion (186) had the highest relative claim frequency and the Porsche 911 Coupe (59) had the lowest. For average loss payment per claim, the Porsche 911 Coupe (304) had the highest value ($6,303) and the Chevrolet Astro Van (70) and GMC Safari Van (70) had the lowest ($1,451).

(Text continues on page 26.)

Table 4
Insurance Losses, Collision Coverages
1989 Models - Passenger Cars

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
All	All	1,177,244	100 = 9.6	100 = $2,244	100 = $215
		SMALL CARS			
Two-Door Models		202,589	124	107	132
Subaru	Justy	1,291	91	83	75
Honda	Civic	8,528	114	82	93
Mazda	323	6,398	104	99	102
Mitsubishi	Precis	1,194	107	101	108
Toyota	Tercel	13,023	126	86	108
Volkswagen	Golf	1,057	100	109	108
Mercury	Tracer	2,741	103	105	109
Ford	Festiva	5,661	109	101	110
Hyundai	Excel	7,997	126	92	116
Dodge	Colt	4,227	112	105	118
Plymouth	Colt	3,360	113	106	119
Dodge	Shadow	3,220	132	97	127
Plymouth	Sundance	3,325	129	100	129
Toyota	Corolla	4,661	126	103	129
Volkswagen	Fox	1,622	107	121	129
Ford	Escort	23,812	118	110	130
Mazda	MX-6	7,443	113	118	133
Chevrolet	Spectrum	2,448	132	102	134
Ford	Probe	35,610	116	116	134
Nissan	Pulsar	2,808	162	87	141
Acura	Integra	7,316	130	109	141
Toyota	Celica	7,504	143	104	149
Dodge	Daytona	9,470	137	112	154
Geo	Metro	3,133	134	115	154
Nissan	Sentra	15,490	141	110	155
Saab	900	1,083	129	129	167
Pontiac	Lemans	4,398	149	113	168
Nissan	240SX	8,936	147	115	169
Four-Door Models		106,382	111	97	108
Plymouth	Horizon	4,186	97	92	89
Toyota	Corolla	16,356	97	100	96
Mercury	Tracer	1,056	97	101	97
Honda	Civic	17,443	112	89	100
Dodge	Shadow	3,584	117	85	100
Ford	Escort	9,134	98	102	100
Dodge	Omni	3,952	98	104	101
Plymouth	Sundance	3,737	117	89	105
Mazda	323	6,981	99	107	106

Table 4 – 1989 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		SMALL CARS (cont'd)			
Acura	Integra	1,404	116	95	110
Hyundai	Excel	14,797	131	87	113
Nissan	Sentra	4,242	118	105	123
Pontiac	Lemans	2,255	140	89	124
Eagle	Summit	3,068	120	107	128
Chevrolet	Spectrum	2,212	128	100	128
Mitsubishi	Mirage	1,624	145	96	138
Volkswagen	Jetta	4,478	124	118	146
Station Wagons/Passenger Vans		13,199	79	100	79
Honda	Civic	1,083	79	82	65
Ford	Escort	2,364	73	89	65
Toyota	Corolla	1,613	87	96	83
Subaru	DL/GL 4WD	2,944	70	130	90
Sports & Specialty		15,693	121	128	154
Honda	Civic CRX	6,380	153	102	156
Chevrolet	Corvette	2,152	90	175	158
		MIDSIZE CARS			
Two-Door Models		148,129	108	98	106
Oldsmobile	Cutlass Ciera	1,148	69	109	75
Pontiac	Grand Prix	14,786	98	88	86
Oldsmobile	Cutlass	7,778	99	88	88
Buick	Regal	8,706	98	91	89
Buick	Skylark	1,945	89	101	89
Ford	Tempo	2,601	103	92	95
Oldsmobile	Calais	7,511	95	101	96
Pontiac	Grand Am	18,767	93	108	101
Chrysler	LeBaron	3,673	114	96	110
Chevrolet	Cavalier	26,749	116	99	116
Honda	Accord	11,028	115	102	117
Pontiac	Sunbird	9,233	122	98	119
Chevrolet	Beretta	22,296	122	101	123
Honda	Prelude	8,863	130	96	124
Four-Door Models		295,117	89	95	84
Dodge	Spirit	3,569	71	71	51
Plymouth	Acclaim	4,290	71	73	52
Plymouth	Reliant	3,056	79	76	60
Dodge	Dynasty	7,329	65	92	60

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Buick	Century	14,123	75	86	65
Dodge	Aries	2,674	67	100	67
Eagle	Premier	3,370	81	87	71
Oldsmobile	Cutlass Ciera	17,056	71	102	72
Chevrolet	Celebrity	14,975	78	93	72
Ford	Tempo 4WD	1,928	74	99	73
Toyota	Camry	27,443	82	92	75
Mercury	Topaz	7,918	84	91	76
Oldsmobile	Calais	5,062	92	84	78
Pontiac	6000	6,345	87	90	78
Ford	Tempo	16,544	86	91	78
Pontiac	Sunbird	1,996	90	87	78
Chevrolet	Cavalier	6,166	93	84	79
Buick	Skyhawk	1,333	100	79	79
Pontiac	Grand Am	7,981	86	94	81
Ford	Taurus	21,417	89	94	83
Buick	Skylark	4,842	97	90	87
Chevrolet	Corsica	18,656	112	79	89
Chrysler	New Yorker	9,309	72	123	89
Mercury	Sable	7,896	89	101	90
Mazda	626	10,756	87	107	93
Volvo	240	3,630	92	103	94
Honda	Accord	33,216	103	96	99
Hyundai	Sonata	2,061	121	83	100
Nissan	Maxima	10,078	97	104	101
Nissan	Stanza	2,600	108	103	111
Toyota	Cressida	2,445	110	103	113
Mitsubishi	Galant	7,920	97	118	115
Mazda	929	3,232	89	130	116
Eagle	Medallion	1,762	146	95	139
Station Wagons/Passenger Vans		26,714	79	91	72
Buick	Century	1,044	64	77	49
Oldsmobile	Cutlass Ciera	1,511	63	85	53
Chevrolet	Celebrity	3,459	75	88	66
Toyota	Camry	2,568	72	94	68
Ford	Taurus	8,817	76	92	70
Mercury	Sable	2,567	90	81	73
Chevrolet	Cavalier	2,226	86	98	84
Volvo	240	1,489	93	107	100
Sports & Specialty		98,995	115	123	142
Lincoln	Continental	4,846	74	96	71
Buick	Riviera	2,610	77	101	77

Table 4 -- 1989 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Cadillac	Eldorado	3,396	81	98	79
Cadillac	Seville	1,591	91	92	84
Acura	Legend 4D	4,361	102	96	98
Acura	Legend 2D	2,246	107	101	108
Volvo	740 SW	1,858	84	128	108
Chrysler	LeBaron Conv.	5,224	101	109	109
Volvo	740 4D	3,925	99	112	110
Toyota	Supra	2,375	108	126	137
Mercedes	190D/E	1,523	83	169	141
Ford	Mustang Conv.	3,916	115	125	143
Pontiac	Firebird	8,875	142	102	145
Chevrolet	Camaro	15,427	135	109	147
Lincoln	Mark VII	3,589	83	196	162
BMW	500 Series	2,502	97	185	180
Ford	Mustang	17,892	133	137	182
BMW	325i 4D	1,312	123	155	190
BMW	325i Conv.	1,047	124	161	200
BMW	325i 2D	2,365	122	177	217
		LARGE CARS			
Two-Door Models		17,431	92	91	84
Ford	Thunderbird	7,681	86	83	72
Mercury	Cougar	7,981	95	98	93
Buick	LeSabre	1,126	106	98	104
Four-Door Models		98,[illegible]3	75	94	70
Chevrolet	Caprice	11,561	75	86	50
Ford	Crown Victoria	10,664	68	81	55
Chrysler	New Yorker 5th Ave	2,297	58	107	62
Buick	LeSabre	13,456	73	93	68
Buick	Electra	8,480	74	97	72
Oldsmobile	Eighty-Eight	15,723	82	89	73
Pontiac	Bonneville	11,262	74	102	76
Oldsmobile	Ninety-Eight	8,578	80	99	80
Mercury	Grand Marquis	16,746	73	114	84
Station Wagons/Passenger Vans		115,290	80	70	56
Plymouth	Grand Voyager	14,262	78	59	46
Dodge	Caravan	15,188	75	65	48
Chevrolet	Caprice	1,801	72	67	48
Chevrolet	Astro Van	11,730	85	57	49
Dodge	Grand Caravan	14,241	80	65	52

Table 4 -- 1989 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		LARGE CARS (cont'd)			
Ford	Extended Aerostar	3,844	70	75	53
Ford	Aerostar	25,939	79	74	59
Plymouth	Voyager	16,714	77	78	60
Ford	Crown Victoria	1,282	63	107	67
GMC	Safari Van	2,481	84	81	68
Mazda	Wagon	4,849	124	70	87
Sports & Specialty		38,610	86	119	102
Cadillac	Fleetwood 4D	2,468	78	95	74
Cadillac	Brougham	3,474	80	102	81
Cadillac	DeVille 4D	11,899	91	100	91
Cadillac	DeVille 2D	2,906	86	107	92
Lincoln	Town Car	8,709	84	113	95
Jaguar	XJ6	2,095	90	146	132
Mercedes	260/300E	2,527	103	130	134
Mercedes	SEL/SDL Series	1,736	81	198	160
Mercedes	300SE	1,007	89	263	235

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
>$200	5%	40%

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year.
Series with less than 1,000 insured vehicle years of exposure are not summarized.

Table 5
Insurance Losses, Collision Coverages
1988 Models - Passenger Cars

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
All	All	5,226,042	100 = 9.7	100 = $2,164	100 = $211
		SMALL CARS			
Two-Door Models		783,485	120	101	122
Subaru	Justy 4WD	4,975	98	88	86
Toyota	Corolla FX	25,128	90	98	88
Mazda	323	20,638	88	101	89
Yugo	Yugo	13,838	114	87	99
Plymouth	Colt	10,277	104	96	100
Subaru	Justy	9,496	108	92	100
Toyota	Tercel	50,740	119	84	100
Honda	Civic	32,253	110	91	100
Volkswagen	Golf	4,619	111	90	100
Ford	Festiva	46,073	99	102	101
Subaru	Hatchback	1,603	102	100	103
Plymouth	Sundance	16,287	122	89	108
Dodge	Colt	13,083	113	98	110
Hyundai	Excel	52,123	125	89	111
Volkswagen	Fox	10,644	120	94	113
Chevrolet	Sprint	12,751	112	102	114
Ford	Escort	65,651	122	94	114
Mercury	Tracer	22,244	111	104	115
Subaru	GL 4WD	1,455	90	127	115
Dodge	Shadow	16,663	127	91	115
Subaru	DL/GL	1,982	124	94	116
Chevrolet	Spectrum	10,888	116	102	118
Isuzu	I-Mark	1,839	119	100	120
Subaru	Hatchback 4WD	1,764	109	115	125
Ford	88 1/2 Escort	39,175	122	105	128
Nissan	Sentra	77,686	122	105	128
Acura	Integra	21,537	128	107	137
Pontiac	Lemans	21,638	137	101	138
Dodge	Daytona	36,368	132	106	139
Toyota	Corolla	17,157	139	102	142
Mazda	MX-6	25,119	112	128	143
Toyota	Celica	33,528	137	105	143
Nissan	Pulsar	19,485	142	102	145
Daihatsu	Charade	3,651	136	108	147
Volkswagen	Jetta	1,406	152	98	148
Subaru	XT Coupe	3,867	166	92	153
Nissan	200SX	7,363	127	130	165
Subaru	XT Coupe 4WD	2,837	137	121	166
Volkswagen	GTI	1,563	141	120	170

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		SMALL CARS (cont'd)			
Isuzu	Impulse	3,946	147	116	170
Saab	900	7,910	122	150	184
Mitsubishi	Cordia	3,076	165	125	207
Volkswagen	Scirocco	1,265	179	149	268
Mitsubishi	Starion	1,632	226	152	342
Plymouth	Conquest	3,812	198	178	351
Four-Door Models		618,238	109	96	104
Plymouth	Horizon	29,385	96	82	79
Ford	Escort	28,410	100	82	82
Chevrolet	Nova	50,225	93	92	86
Dodge	Omni	27,313	98	89	88
Subaru	GL 4WD	2,014	96	91	88
Dodge	Shadow	18,253	107	83	88
Plymouth	Sundance	18,662	109	86	94
Volkswagen	Golf	4,006	104	91	94
Toyota	Corolla	57,202	100	96	96
Isuzu	I-Mark	5,739	102	97	100
Mazda	323	35,082	98	104	102
Honda	Civic	62,438	113	91	103
Toyota	Tercel	1,782	117	88	103
Ford	88 1/2 Escort	17,367	103	103	105
Chevrolet	Sprint	6,615	108	100	107
Mercury	Tracer	18,524	100	109	109
Chevrolet	Spectrum	13,803	113	98	112
Hyundai	Excel	95,484	124	91	112
Dodge	Colt	8,368	112	104	116
Plymouth	Colt	6,903	111	106	117
Subaru	DL/GL	8,435	107	112	119
Nissan	Sentra	20,134	111	109	122
Acura	Integra	7,313	121	102	124
Volkswagen	Fox	19,497	122	103	125
Pontiac	Lemans	20,088	129	99	127
Volkswagen	Jetta	25,778	122	105	128
Mitsubishi	Mirage	3,870	136	113	154
Saab	900	4,231	114	141	161
Station Wagons/Passenger Vans		102,112	88	91	80
Nissan	Stanza	2,924	74	75	56
Honda	Civic	5,030	78	79	61
Ford	Escort	16,606	85	78	67
Subaru	DL/GL 4WD	20,022	77	96	74
Honda	Civic 4WD	1,905	84	91	77

Table 5 -- 1988 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		SMALL CARS (cont'd)			
Subaru	DL/GL	8,990	79	98	77
Nissan	Van	2,736	117	66	77
Toyota	Van	2,197	111	71	79
Mazda	323	1,156	85	95	81
Plymouth	Colt	2,081	82	99	81
Ford	88 1/2 Escort	6,230	82	108	88
Toyota	Corolla	6,041	95	94	89
Mercury	Tracer	5,254	94	98	92
Dodge	Colt	2,677	88	110	97
Volkswagen	Fox	7,383	102	95	98
Nissan	Sentra	2,449	89	111	98
Mitsubishi	Wagon	4,094	140	79	111
Sports & Specialty		123,271	121	124	149
Buick	Reatta	1,585	84	122	103
Mazda	RX-7 Conv.	4,206	114	99	113
Porsche	911 Coupe	1,277	60	203	121
Toyota	Celica Conv.	3,293	121	101	123
Chevrolet	Corvette Conv.	3,201	71	176	125
Pontiac	Fiero	12,314	127	100	127
Volkswagen	Cabriolet	4,372	107	119	128
Alfa Romeo	Spider Conv.	1,023	118	115	136
Toyota	MR2	5,102	143	96	137
Porsche	924 Coupe	1,020	86	162	139
Ford	EXP	6,335	135	104	141
Mazda	RX-7	16,448	123	116	142
Nissan	300ZX	6,005	119	121	144
Nissan	300ZX 2+2	2,841	104	148	153
Chevrolet	Corvette	8,197	84	184	154
Honda	Civic CRX	28,073	148	105	155
Ford	88 1/2 Escort EXP	3,598	142	111	157
Mercedes	560SL Conv.	5,536	58	282	163
Saab	900 Conv.	1,761	114	162	185
Porsche	911 Targa/Cabriolet	1,842	69	308	213
Porsche	944 Coupe	2,893	122	228	278
		MIDSIZE CARS			
Two-Door Models		811,274	108	99	107
Plymouth	Reliant	4,478	83	84	70
Dodge	Aries	3,371	88	87	77
Chevrolet	Celebrity	5,001	95	85	81
Oldsmobile	Cutlass RWD	14,146	80	102	82

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Oldsmobile	Cutlass FWD	33,193	102	81	83
Buick	Regal	52,114	103	85	88
Pontiac	Grand Prix	33,231	99	89	88
Ford	Tempo	19,872	103	88	90
Buick	Skylark	12,021	97	94	91
Oldsmobile	Cutlass Ciera	10,613	83	116	96
Mercury	Topaz	4,238	108	92	99
Pontiac	Grand Am	79,720	96	102	99
Buick	Skyhawk	6,430	111	90	100
Oldsmobile	Firenza	1,108	113	92	104
Chevrolet	Monte Carlo	15,199	91	114	104
Oldsmobile	Calais	34,453	111	97	107
Chevrolet	Cavalier	70,724	112	99	111
Mercury	Cougar	56,530	101	112	113
Honda	Accord	47,000	114	101	115
Pontiac	Sunbird	21,214	127	92	116
Chrysler	LeBaron	22,681	121	97	117
Honda	Prelude	48,562	119	99	118
Merkur	XR4Ti	2,137	96	125	120
Chevrolet	Beretta	149,306	125	97	121
Ford	Thunderbird	62,952	102	126	128
Four-Door Models		1,288,217	92	95	87
Dodge	Dynasty	20,235	65	83	54
Chrysler	LeBaron GTS	5,411	86	80	69
Chevrolet	Celebrity	62,462	77	90	69
Buick	Century	37,603	82	87	71
Plymouth	Caravelle	4,755	81	88	71
Dodge	Aries	33,385	79	91	72
Oldsmobile	Cutlass Ciera	80,233	75	99	74
Chrysler	New Yorker (E Body)	5,139	76	98	74
Chrysler	LeBaron	11,593	75	99	75
Chrysler	New Yorker (C Body)	29,534	73	103	75
Ford	Tempo 4WD	6,323	80	96	76
Plymouth	Reliant	40,203	82	94	77
Toyota	Camry 4WD	2,199	83	94	78
Ford	Tempo	80,449	90	87	78
Toyota	Camry	110,016	84	94	79
Mercury	Topaz	26,183	86	92	79
Eagle	Premier	17,416	85	94	80
Ford	Taurus	91,775	87	92	80
Volvo	240	15,003	81	100	81
Mercury	Sable	30,848	94	88	82
Pontiac	Grand Am	30,273	88	97	86

Table 5 – 1988 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Pontiac	6000	22,139	89	98	87
Dodge	600	4,383	93	93	87
Buick	Skylark	13,450	97	90	87
Chevrolet	Cavalier	33,253	93	94	88
Dodge	Lancer	3,250	93	97	90
Oldsmobile	Calais	19,333	102	91	93
Chevrolet	Corsica	129,183	113	84	94
Buick	Skyhawk	5,399	105	91	96
Pontiac	Sunbird	8,189	102	94	96
Nissan	Stanza	12,546	102	95	97
Honda	Accord	182,075	105	97	102
Mazda	626	40,531	88	116	102
Mazda	929	16,260	85	120	102
Mitsubishi	Sigma	4,148	95	110	105
Cadillac	Cimarron	2,824	91	118	107
Oldsmobile	Firenza	2,065	112	98	110
Toyota	Cressida	6,072	109	117	127
Nissan	Maxima	29,374	102	127	130
Eagle	Medallion	10,988	134	105	141
Peugeot	505	1,053	107	148	159
Station Wagons/Passenger Vans		143,026	79	93	74
American	Eagle	1,301	52	81	42
Dodge	Aries	9,505	72	86	62
Plymouth	Colt Vista 4WD	1,934	65	98	64
Dodge	Colt Vista 4WD	2,331	73	88	65
Toyota	Camry	11,890	73	92	66
Plymouth	Reliant	10,114	76	89	68
Ford	Taurus	37,571	78	88	68
Buick	Century	3,646	80	86	69
Chevrolet	Celebrity	15,568	78	92	72
Nissan	Maxima	1,442	74	100	74
Mercury	Sable	10,079	88	88	78
Chevrolet	Cavalier	9,553	84	95	80
Oldsmobile	Cutlass Ciera	6,740	83	97	80
Pontiac	6000	2,357	84	98	82
Volvo	240	6,890	76	108	83
Plymouth	Colt Vista	2,506	84	105	88
Dodge	Colt Vista	3,196	86	119	103
Eagle	Medallion	3,893	111	104	115
Sports & Specialty		401,344	112	127	142
Merkur	Scorpio	5,629	72	114	82
Volvo	740 SW	6,449	87	96	83
Lincoln	Continental	13,150	77	124	96

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Volvo	760 SW	1,178	97	102	99
Cadillac	Seville	7,914	86	116	100
Acura	Legend 4D	27,965	96	107	102
Oldsmobile	Toronado	7,175	97	111	108
Cadillac	Eldorado	14,726	98	111	109
Volvo	740 4D	13,905	93	118	110
Acura	Legend 2D	13,797	100	113	113
Austin Rov	Sterling 825	2,588	102	116	118
Chrysler	LeBaron Conv.	18,755	110	108	118
Chevrolet	Cavalier Conv.	3,114	93	128	119
Lincoln	Mark VII	21,916	86	141	122
Buick	Riviera	3,532	105	116	122
Volvo	760 4D	3,269	108	122	132
Ford	Mustang Conv.	15,743	112	126	142
Audi	5000	2,686	106	142	151
Chevrolet	Camaro Conv.	1,928	119	127	151
Mercedes	190D/E	7,246	105	145	152
Pontiac	Sunbird Conv.	1,229	131	117	153
Chevrolet	Camaro	42,124	134	116	154
Audi	80/90	4,778	120	131	157
Mercedes	300CE	1,138	79	200	159
Pontiac	Firebird	29,388	142	112	160
Saab	9000	5,633	108	149	161
Ford	Mustang	81,377	126	128	162
BMW	500 Series	10,811	107	158	169
BMW	325i Conv.	4,870	90	191	172
Audi	80/90 Quattro	1,546	104	179	185
Toyota	Supra	10,942	117	163	191
BMW	325 2D	4,377	111	173	192
Jaguar	XJ-S	2,695	99	241	239
BMW	325 4D	2,422	123	203	249
BMW	M3	1,315	126	380	481
		LARGE CARS			
Two-Door Models		8,656	104	109	113
Oldsmobile	Delta 88	3,590	97	107	104
Buick	LeSabre	5,048	108	108	117
Four-Door Models		363,148	78	91	71
Chevrolet	Caprice	34,845	74	78	58
Plymouth	Gran Fury	1,927	72	81	58
Dodge	Diplomat	4,227	67	98	65
Ford	Crown Victoria	36,529	76	88	67

Table 5 – 1988 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		LARGE CARS (cont'd)			
Mercury	Grand Marquis	51,638	71	94	67
Buick	LeSabre	49,699	82	84	69
Chrysler	New Yorker 5th Ave	18,652	67	109	73
Pontiac	Bonneville	36,985	81	91	74
Oldsmobile	Ninety-Eight	32,836	80	94	75
Oldsmobile	Delta 88	60,187	81	93	76
Buick	Electra	35,619	80	99	79
Station Wagons/Passenger Vans		368,113	75	73	55
GMC	Safari Van	10,625	78	63	49
Chevrolet	Astro Van	49,212	79	63	50
Dodge	Grand Caravan	44,350	72	71	51
Plymouth	Grand Voyager	42,594	76	67	51
Dodge	Caravan	57,973	71	73	52
Pontiac	Safari Wagon	1,780	70	76	53
Plymouth	Voyager	58,795	74	72	53
Oldsmobile	Custom Cruiser	3,859	77	69	54
Ford	Aerostar	78,639	74	83	62
Chevrolet	Caprice	7,789	78	80	62
Buick	LeSabre	1,344	77	84	65
Ford	Crown Victoria	5,264	78	93	72
Mercury	Grand Marquis	3,645	80	97	78
Buick	Electra	1,755	79	116	91
Sports & Specialty		215,153	84	119	100
Cadillac	DeVille 4D	43,811	80	100	80
Lincoln	Town Car	88,812	82	99	81
Cadillac	Brougham	20,121	76	110	83
Cadillac	Fleetwood d'Elegance	6,575	81	115	93
Cadillac	DeVille 2D	12,762	92	117	107
Jaguar	XJ6	11,711	88	163	142
Mercedes	SEL Series	7,875	90	164	147
Mercedes	260/300E	10,343	97	174	168
BMW	735i	8,276	104	179	187
Mercedes	300SE	1,506	97	200	194
BMW	735/750iL	1,256	121	239	289

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
>$200	5%	40%

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year.
Series with less than 1,000 insured vehicle years of exposure are not summarized.

Table 6
Insurance Losses, Collision Coverages
1987 Models - Passenger Cars

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
All	All	9,565,322	100 = 9.6	100 = $2,074	100 = $199
		SMALL CARS			
Two-Door Models		1,416,303	118	99	117
Chevrolet	Chevette	19,700	96	81	78
Yugo	Yugo	33,250	103	82	84
Toyota	Tercel	70,099	104	84	87
Honda	Civic	52,454	101	88	88
Mazda	323	15,636	97	93	91
Toyota	Corolla FX	28,973	95	101	96
Plymouth	Colt	15,356	107	91	97
Pontiac	1000	2,675	110	89	98
Subaru	Hatchback	5,126	102	96	98
Subaru	GL 4WD	6,316	95	106	101
Ford	Escort	161,930	115	88	101
Plymouth	Sundance	33,350	119	85	102
Dodge	Colt	19,582	108	98	106
Hyundai	Excel	60,658	120	90	107
Renault	Alliance	6,405	111	97	108
Volkswagen	Fox	9,314	118	92	109
Subaru	Justy	8,406	118	93	110
Chevrolet	Sprint	30,462	110	100	110
Mercury	Lynx	15,734	121	92	110
Subaru	Hatchback 4WD	3,087	106	105	111
Plymouth	Turismo	40,391	120	93	111
Chevrolet	Spectrum	16,936	116	96	112
Dodge	Shadow	35,157	130	87	113
Dodge	Charger	44,267	117	96	113
Isuzu	I-Mark	5,183	102	112	114
Subaru	DL/GL	6,924	111	106	118
Volkswagen	Golf	15,018	121	98	118
Nissan	Sentra	221,242	115	104	119
Honda	Prelude	59,408	116	107	123
Volkswagen	Jetta	5,344	135	96	130
Nissan	Pulsar	56,590	132	98	130
Dodge	Daytona	27,937	119	110	131
Toyota	Corolla	18,980	118	112	132
Toyota	Celica	87,307	132	101	133
Acura	Integra	38,796	119	112	134
Mazda	626	20,188	132	102	134
Subaru	XT Coupe	10,839	153	92	140

Table 6 – 1987 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		SMALL CARS (cont'd)			
Mitsubishi	Mirage	4,868	140	101	141
Nissan	200SX	33,382	123	118	145
Subaru	XT Coupe 4WD	3,142	149	100	149
Volkswagen	GTI	10,657	143	106	150
Saab	900	20,190	129	132	170
Renault	GTA	3,863	140	124	173
Mitsubishi	Cordia	4,190	152	132	200
Plymouth	Conquest	12,889	177	139	246
Volkswagen	Scirocco	7,252	174	151	262
Mitsubishi	Starion	5,863	186	148	275
Four-Door Models		1,383,959	106	95	100
Chevrolet	Chevette	11,033	98	75	74
Dodge	Omni	98,451	92	82	75
Plymouth	Horizon	124,595	95	83	79
Ford	Escort	74,905	98	84	82
Plymouth	Sundance	39,558	106	81	86
Chevrolet	Nova	115,416	97	90	87
Mercury	Lynx	8,773	98	91	90
Toyota	Corolla	96,734	96	95	92
Toyota	Tercel	6,322	106	88	93
Dodge	Shadow	35,500	114	84	95
Pontiac	1000	1,459	102	95	96
Chevrolet	Sprint	18,280	102	96	98
Volkswagen	Golf	20,851	109	91	99
Renault	Alliance	9,604	111	91	101
Mazda	323	46,337	100	104	104
Isuzu	I-Mark	11,148	103	102	105
Honda	Civic	118,091	109	96	105
Chevrolet	Spectrum	42,741	114	95	109
Hyundai	Excel	131,522	122	92	112
Nissan	Sentra	108,267	110	102	113
Mazda	626	64,048	110	103	113
Subaru	GL 4WD	9,137	104	110	114
Subaru	DL/GL	24,603	106	108	115
Dodge	Colt	22,885	114	101	115
Plymouth	Colt	18,802	113	103	116
Acura	Integra	22,680	113	108	122
Volkswagen	Fox	9,183	121	101	122
Volkswagen	Jetta	62,844	124	102	126
Mitsubishi	Mirage	7,623	133	101	134
Saab	900	12,330	117	127	148
Mitsubishi	Tredia	5,670	131	122	159
Alfa Romeo	Milano	4,521	171	158	269

Table 6 – 1987 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		SMALL CARS (cont'd)			
Station Wagons/Passenger Vans		258,084	87	92	81
Mercury	Lynx	5,069	78	80	63
Ford	Escort	50,191	81	82	67
Toyota	Tercel 4WD	6,126	77	88	68
Honda	Civic	14,908	74	94	70
Mazda	323	9,857	83	87	72
Honda	Civic 4WD	5,588	76	100	76
Nissan	Stanza	9,290	72	113	81
Subaru	DL/GL	22,055	87	97	84
Subaru	DL/GL 4WD	55,493	84	101	85
Toyota	Tercel	7,865	96	92	88
Nissan	Sentra	19,739	87	102	88
Volkswagen	Fox	2,870	98	90	88
Volkswagen	Vanagon	6,278	121	73	89
Toyota	Van	12,967	103	87	89
Mitsubishi	Wagon	4,399	120	76	91
Nissan	Sentra 4WD	2,076	86	110	94
Nissan	Van	16,808	108	88	95
Nissan	Stanza 4WD	2,112	97	100	98
Toyota	Van 4WD	4,384	107	93	99
Sports & Specialty		329,267	120	129	155
Honda	Civic CRX	65,626	121	105	127
Toyota	Celica Conv.	3,415	138	96	133
Ford	EXP	23,435	130	103	133
Volkswagen	Cabriolet	14,320	113	119	134
Mercedes	560SL Conv.	10,704	69	199	138
Saab	900 Conv.	1,644	106	131	138
Pontiac	Fiero	40,846	143	97	138
Subaru	XT Coupe DL	1,266	148	94	139
Toyota	MR2	18,110	134	106	142
Alfa Romeo	Spider Conv.	2,392	122	120	146
Nissan	300ZX 2+2	7,952	127	132	167
Mazda	RX-7	53,954	131	129	169
Nissan	300ZX	22,239	116	146	170
Chevrolet	Corvette	18,694	80	218	174
Porsche	911 Targa/Cabriolet	4,044	65	273	178
Porsche	911 Coupe	3,670	59	304	180
Audi	4000 Quattro	2,893	125	147	183
Porsche	924 Coupe	6,868	115	162	186
Cadillac	Allante Conv.	1,620	101	186	189
Chevrolet	Corvette Conv.	7,716	78	245	191
Porsche	928 Coupe	1,597	105	220	230
Porsche	944 Coupe	13,804	112	218	243

Table 6 – 1987 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS			
Two-Door Models		1,084,371	104	100	104
Dodge	Aries	6,340	82	92	76
Plymouth	Reliant	8,087	84	90	76
Ford	Tempo 4WD	1,522	85	93	79
Buick	Century	5,701	90	88	79
Pontiac	Grand Prix	14,856	92	93	85
Oldsmobile	Cutlass	70,509	84	103	86
Chevrolet	Celebrity	13,746	95	94	89
Oldsmobile	Cutlass Ciera	25,144	85	104	89
Ford	Tempo	56,669	112	84	93
Buick	Somerset	39,747	103	91	93
Pontiac	6000	2,637	95	100	95
Mercury	Topaz	12,001	112	88	98
Buick	Regal	48,410	91	110	100
Pontiac	Grand Am	142,564	99	102	101
Oldsmobile	Firenza	5,139	113	90	102
Buick	Skyhawk	20,288	111	92	102
Oldsmobile	Calais	63,878	111	93	103
Chevrolet	Monte Carlo	61,472	93	112	104
Mercury	Cougar	87,658	97	109	106
Honda	Accord	67,269	108	102	111
Ford	Thunderbird	101,808	95	120	114
Chrysler	LeBaron	57,701	113	103	116
Chevrolet	Cavalier	115,056	133	89	118
Pontiac	Sunbird	43,985	130	93	120
Chevrolet	Beretta	5,285	126	96	121
Merkur	XR4Ti	5,314	108	134	145
Audi	GT Coupe	1,572	155	149	230
Four-Door Models		2,320,804	95	96	91
Ford	Tempo 4WD	6,984	86	75	64
Oldsmobile	Cutlass	24,355	77	84	65
Chrysler	LeBaron	47,931	78	90	71
Plymouth	Caravelle	28,126	82	88	72
Dodge	600	26,549	80	93	75
Toyota	Camry	150,460	80	96	77
Chevrolet	Celebrity	151,976	85	91	77
Buick	Century	113,170	88	89	78
Oldsmobile	Cutlass Ciera	170,524	81	98	79
Dodge	Aries	43,450	85	93	79
Plymouth	Reliant	49,363	86	93	80
Ford	Tempo	129,595	100	81	81
Chrysler	New Yorker	55,447	83	97	81
Pontiac	Sunbird	21,140	95	87	83
Mercury	Topaz	41,882	98	85	83
Chevrolet	Corsica	5,351	97	85	83
Ford	Taurus	178,579	92	91	83

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Buick	Skyhawk	11,419	99	85	85
Pontiac	6000	74,668	93	93	87
Dodge	Lancer	19,629	97	91	88
Chrysler	LeBaron GTS	31,134	98	91	89
Mercury	Sable	62,905	99	92	91
Oldsmobile	Firenza	7,439	100	91	91
Chevrolet	Cavalier	90,455	119	80	95
Pontiac	Grand Am	61,019	94	101	95
Oldsmobile	Calais	36,626	106	92	98
Volvo	240	32,606	94	104	98
Cadillac	Cimarron	12,693	92	107	98
Buick	Skylark	25,686	107	93	99
Honda	Accord	276,505	104	98	102
Nissan	Stanza	93,381	106	99	104
Toyota	Cressida	27,957	106	104	110
Nissan	Maxima	181,622	102	121	124
Mitsubishi	Galant	11,841	118	115	136
Volkswagen	Quantum	3,980	140	101	141
Peugeot	505	5,112	112	137	152
Audi	4000	8,634	137	142	194
Station Wagons/Passenger Vans		356,418	83	92	77
American	Eagle	3,030	63	103	65
Buick	Century	12,882	79	85	67
Oldsmobile	Firenza	1,917	86	79	68
Toyota	Camry	27,305	75	91	68
Dodge	Colt Vista 4WD	6,777	67	101	68
Plymouth	Colt Vista 4WD	5,640	75	95	71
Oldsmobile	Cutlass Ciera	19,867	79	91	72
Dodge	Aries	15,675	78	94	73
Chevrolet	Celebrity	39,508	80	91	73
Plymouth	Reliant	17,696	78	95	74
Pontiac	6000	8,742	82	92	75
Ford	Taurus	75,119	83	92	76
Mercury	Sable	22,632	85	92	78
Volvo	240	18,379	80	99	79
Chevrolet	Cavalier	31,184	104	79	82
Pontiac	Sunbird	2,546	95	86	82
Chrysler	LeBaron	4,520	71	122	87
Dodge	Colt Vista	13,561	89	98	88
Plymouth	Colt Vista	10,945	95	99	94
Nissan	Maxima	12,791	88	107	94
Buick	Skyhawk	2,453	98	98	96
Volkswagen	Quantum	1,210	95	102	97
Toyota	Cressida	1,125	99	119	117

Table 6 – 1987 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS (cont'd)			
Sports & Specialty		684,334	117	122	142
Oldsmobile	Toronado	10,733	108	88	95
Acura	Legend 4D	34,682	92	105	97
Acura	Legend 2D	8,724	95	104	99
Chrysler	LeBaron Conv.	5,932	96	103	99
Cadillac	Seville	12,585	89	112	100
Chevrolet	Cavalier Conv.	4,437	123	83	102
Austin Rov	Sterling 825	11,236	107	98	105
Cadillac	Eldorado	13,862	91	116	106
Lincoln	Continental	13,591	95	120	114
Volvo	740/760 SW	16,016	103	113	115
Volvo	740/760 4D	42,585	102	114	116
Buick	Riviera	10,870	112	106	119
Saab	9000	11,246	113	117	133
Lincoln	Mark VII	13,854	90	149	134
Pontiac	Sunbird Conv.	3,041	127	107	136
Ford	Mustang Conv.	17,450	112	122	137
Jaguar	XJ-S	1,844	93	148	137
Ford	Mustang	112,968	119	117	140
Chevrolet	Camaro	107,334	132	108	143
Audi	5000 4D	18,164	99	148	146
Pontiac	Firebird	72,300	143	107	154
BMW	500 Series	14,120	98	159	156
Toyota	Supra	38,124	111	148	165
Mercedes	190D/E	19,624	119	144	170
BMW	325 4D	21,556	112	154	173
BMW	325i Conv.	7,820	105	179	188
Audi	5000 Quattro 4D	3,960	111	176	195
BMW	325 2D	30,427	122	173	210
BMW	635CSi/L6	1,941	112	222	248
		LARGE CARS			
Two-Door Models		42,648	90	97	87
Ford	Crown Victoria	5,234	60	85	51
Chevrolet	Caprice	2,923	64	80	51
Oldsmobile	Ninety-Eight	3,748	77	90	70
Mercury	Grand Marquis	4,331	70	116	81
Buick	Electra	3,327	86	106	91
Oldsmobile	Delta 88	10,012	103	97	101
Buick	LeSabre	13,071	104	98	102
Four-Door Models		808,353	78	92	72
Ford	Crown Victoria	61,275	61	91	56
Chevrolet	Caprice	97,241	73	78	56
Dodge	Diplomat	18,227	66	89	59

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		LARGE CARS (cont'd)			
Mercury	Grand Marquis	94,712	66	91	60
Chrysler	New Yorker 5th Ave	90,855	68	99	68
Plymouth	Gran Fury	9,352	77	95	73
Buick	Electra	58,653	82	92	75
Buick	LeSabre	106,987	88	92	81
Oldsmobile	Ninety-Eight	59,316	85	96	82
Oldsmobile	Delta 88	123,906	89	93	83
Pontiac	Bonneville	87,823	85	97	83
Station Wagons/Passenger Vans		570,935	75	78	58
GMC	Safari Van	19,607	74	70	52
Chevrolet	Astro Van	86,697	76	70	53
Plymouth	Voyager	124,152	75	75	56
Dodge	Caravan	124,154	73	80	58
Pontiac	Safari Wagon	9,011	75	79	59
Ford	Aerostar	143,198	73	84	61
Buick	LeSabre	3,493	78	79	62
Mercury	Grand Marquis	7,214	76	82	63
Ford	Crown Victoria	11,269	72	89	63
Chevrolet	Caprice	23,766	82	82	67
Buick	Electra	4,552	85	81	69
Oldsmobile	Custom Cruiser	12,999	85	87	74
Sports & Specialty		309,839	87	118	102
Cadillac	Brougham	46,992	80	98	78
Cadillac	DeVille 4D	85,742	86	99	85
Lincoln	Town Car	57,924	86	101	86
Cadillac	Fleetwood d'Elegance	13,492	84	107	89
Cadillac	DeVille 2D	28,507	86	114	98
BMW	735i	1,810	84	142	120
Jaguar	XJ6	11,532	90	152	136
Mercedes	300TD	1,946	120	115	138
Mercedes	260E/300D/E	32,965	100	149	148
Mercedes	SEL/SDL Series	25,903	91	181	165
Mercedes	560SEC	1,331	95	293	279

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
>$200	5%	40%

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year.
Series with less than 1,000 insured vehicle years of exposure are not summarized.

Vans, Pickups, and Utility Vehicles

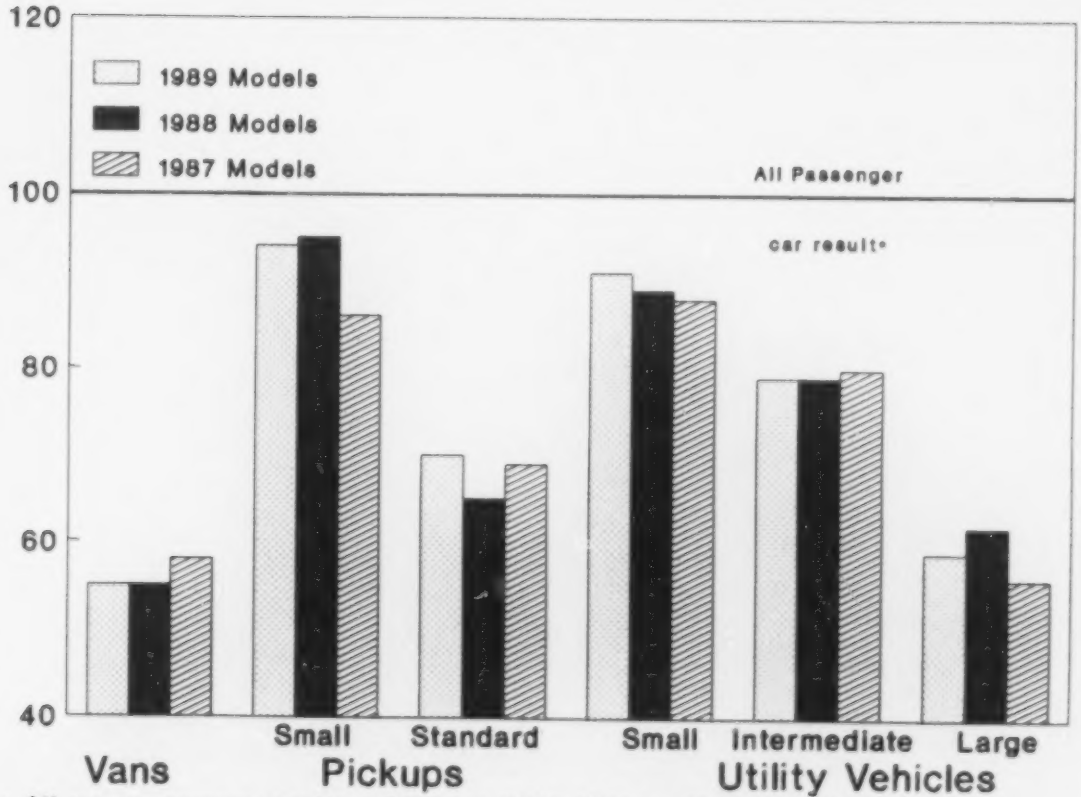
This section presents the results for 1989, 1988, and 1987 model year vans, pickups, and utility vehicles insured under noncommercial collision coverages. The results for the 1989 models are based on a total exposure of approximately 372,000 insured vehicle years, those for 1988 models on approximately 1.7 million insured vehicle years, and those for 1987 models on over 2.7 million insured vehicle years. Results for individual vehicle series with less than 1,000 insured vehicles years of exposure are not given.

The results for the pickups are given separately for small and standard pickups. Small pickups are defined as those with curb weight of less than 3,500 pounds. The results for utility vehicles are given separately for three size classes: small utility vehicles with wheelbases less than 100 inches, intermediate utility vehicles with wheelbases in the range of 100-120 inches, and large utility vehicles with wheelbases exceeding 120 inches.

Figure 1 graphically presents relative average loss payments per insured vehicle year for 1989, 1988, and 1987 model year vans, pickups, and utility vehicles. These results are presented in relative terms with the value 100 corresponding to the result for *all passenger cars* combined for each model year. Thus, the value 55 for the 1989 model year vans indicates an average loss payment per insured vehicle year that was 55 percent of the $215 for all 1989 passenger cars.

As can be seen in Figure 1, vans and large utility vehicles as a group had the lowest average loss payments per insured vehicle year, and small pickups and small utility vehicles had the highest. Specifically, the 1988 and 1989 vans and 1987 large utility vehicles had the best results; the 1988 and 1989 small pickups and 1989 small utility vehicles had the highest collision losses.

Figure 1 -- Collision Coverages
Relative Average Loss Payment Per Insured Vehicle Year
1987-89 Model Year Vans, Pickups, and Utility Vehicles



* All passenger-car results - $215 for 1989, $211 for 1988, $199 for 1987

Tables 7, 8, and 9 present detailed collision coverage results for all 1989, 1988, and 1987 model year vans, pickups, and utility vehicles with at least 1,000 insured vehicle years of exposure. The values displayed are total exposure in insured vehicle years and relative values for claim frequency, average loss payment per claim, and average loss payment per insured vehicle year. The relative numbers are based on the value 100, which corresponds to the result for *all passenger cars* combined in each loss category for each model year.

Relationships between vehicle size and collision losses are apparent from these results. For pickups and utility vehicles, the smaller vehicles displayed larger average loss payments per insured vehicle year than larger vehicles. For each of the three model years, small, intermediate, and large utility vehicles had similar claim frequencies, but the average loss payments per claim decreased as vehicle size increased. For 1989 model year utility vehicles, even though large models had a higher claim frequency, their average loss payment per insured vehicle year is substantially lower than both small and intermediate utility vehicles. For pickups, the average loss payments per claim were similar for the two size classes, but the small pickups had substantially higher claim frequencies.

1989 Models During Their First Year

Table 7 (page 28) presents detailed collision coverage results for 1989 model year vans, pickups, and utility vehicles during their first year.

The Ford F-150 Super Cab 4X4 (45) and GMC 1500 Extended Cab (45), both standard pickups, had the lowest relative average loss payment per insured vehicle year, with results less than half the result for all 1989 passenger cars. The Dodge B250 Cargo Van, Chevrolet Suburban (1/2T), and Ford E-150 Club Wagon (1/2-3/4 T) also had average loss payments per insured vehicle year that were less than half the 1989 all-passenger-car result. The Nissan Standard Bed (149) and Toyota Standard Bed 4x4 (146), both small pickups, had the highest average loss payments per insured vehicle year. The Dodge Ram Charger (53) had the lowest claim frequency and the Nissan Standard Bed pickup (146) had the highest. The GMC Vandura (3/4T) (47) had the lowest average loss payment per claim ($1,055), and the Dodge W150 (1/2T)4X4 pickup (143) had the highest average loss payment per claim ($3,209). The results for all three collision loss measures for the Nissan Standard Bed and Toyota Standard Bed 4x4, both small pickups, and the Toyota 4Runner, a standard pickup, exceeded the 1989 all-passenger-car averages.

1988 Models During Their First Two Years

Table 8 (page 31) presents detailed collision coverage results for 1988 model year vans, pickups, and utility vehicle. The results are the combined results for the first two years of the 1988 models.

The Ford E-150 Club Wagon (1/2-3/4 T) (44) had the lowest average loss payment per insured vehicle year. The Dodge B250 (3/4T) and GMC Safari Cargo Van also had average loss payments per insured vehicle year that were less than half the 1988 all-passenger-car value. The Range Rover (191), an intermediate utility vehicle, had by far the highest average loss payment per insured vehicle year. The Dodge B250 (3/4T) (55) had the lowest claim frequency, and the Toyota 4Runner pickup (125) had the highest. The GMC Safari Cargo Van (57) had the lowest average loss payment per claim ($1,233). The Range Rover (168) had the highest average loss payment per claim ($3,635). Toyota and Nissan products accounted for 8 of the 12 vehicles that equalled or exceeded the 1988 passenger car results in all three collision loss categories.

1987 Models During Their First Three Years

Table 9 (page 35) presents detailed collision coverage results for 1987 model year vans, pickups, and utility vehicles. The results are the combined results for the first three years of the 1987 models.

The GMC Suburban (3/4T) 4X4 (43) had the lowest average loss payment per insured vehicle year. Three standard pickups, one van, and one other large utility vehicle also had results that were less than half the 1987 all-passenger-car result: the Ford F-250 Super Cab, GMC 2500 Series (3/4T), and the Chevrolet 20 Series (3/4T) 4X4, all standard pickups; the Chevrolet Suburban (1/2T), a large utility vehicle; and the Dodge B150 (1/2T) van. The Toyota 4Runner Wagon (151) and Range Rover (150), both intermediate utility vehicles, had the highest average loss payment per insured vehicle year. The Mitusbishi Cargo Van (142) had the highest claim frequency and the GMC Suburban (3/4T) 4X4 (56) had the lowest. The GMC Rally Wagon (3/4T) (58) had the lowest average loss payment per claim ($1,203) and the Range Rover (144) had the highest ($2,987).

The three collision loss results for the Mazda B-Series Cab Plus 4X4, Toyota and Nissan Standard Bed 4x4 pickups, Toyota 4Runner pickup and wagon, and the Range Rover exceeded the 1987 all-passenger-car averages.

Table 7
Insurance Losses, Collision Coverages
1989 Models - Vans, Pickups, and Utility Vehicles

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		VANS			
All Vans		33,615	87	63	55
Dodge	B250 Cargo Van	3,502	74	62	46
Ford	E-150 Club Wagon (1/2-3/4T)	1,190	89	55	49
GMC	Vandura (3/4T)	1,813	107	47	51
Dodge	B150 Cargo Van	1,928	74	69	51
GMC	Safari Cargo Van	1,046	90	59	54
Chevrolet	Chevy Van (3/4T)	6,541	90	61	55
Ford	E-150 Econoline (1/2-3/4T)	7,687	91	62	56
Chevrolet	Astro Cargo Van	3,960	99	59	59
Ford	E-250 Econoline (3/4T)	1,280	96	64	62
		PICKUPS			
Small Pickups		104,266	98	95	94
Dodge	Dakota (1/2T)	6,916	77	85	66
Ford	Ranger Super Cab	4,891	80	82	66
Chevrolet	T10 4x4	1,917	68	100	68
Ford	Ranger Super Cab 4x4	2,470	82	87	72
Jeep	Comanche	2,456	89	80	72
Chevrolet	T10 Extended Cab 4x4	1,892	83	89	74
Dodge	D150 (1/2T)	3,278	85	89	75
Dodge	Ram50	1,754	101	82	82
GMC	S15	3,463	94	88	82
Mazda	B Series Cab Plus	3,505	106	81	86
Ford	Ranger	11,441	84	103	87
Mazda	B Series Standard Bed	6,495	101	90	91
Chevrolet	S10 Extended Cab	2,314	94	99	93
Chevrolet	S10	17,634	99	97	96
Nissan	King Cab	2,118	110	93	102
Mitsubishi	Standard Bed	1,966	121	85	102
Toyota	Xtra Cab	2,935	108	98	106
Nissan	King Cab 4x4	1,465	107	100	108
Isuzu	Standard Bed	1,684	108	100	108
Nissan	Standard Bed 4x4	1,117	127	88	111
Toyota	Standard Bed	5,142	125	92	115
Ford	Ranger 4x4	2,006	91	128	116
Toyota	Standard Bed 4x4	4,854	114	128	146
Nissan	Standard Bed	4,614	146	102	149

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		PICKUPS (cont'd)			
Standard Pickups		126,971	72	96	70
Ford	F-150 Super Cab 4x4	2,411	69	65	45
GMC	1500 Extended Cab	1,164	61	74	45
Ford	F-250 Super Cab	2,246	73	68	50
Chevrolet	10 Extended Cab (1/2T) 4x4	1,269	74	72	54
Chevrolet	20 Extended Cab (3/4T)	1,044	73	80	58
Ford	F-250 (3/4T) 4x4	6,064	67	89	59
Ford	F-150 Super Cab	5,708	71	84	59
Chevrolet	10 Series (1/2T) 4x4	11,243	64	96	61
Chevrolet	10 Extended Cab (1/2T)	3,574	77	80	62
Ford	F-250 (3/4T)	4,277	74	87	64
Chevrolet	20 Series (3/4T) 4x4	3,168	71	92	66
Chevrolet	20 Series (3/4T)	2,306	65	104	67
GMC	1500 Series (1/2T) 4x4	2,892	67	100	67
GMC	1500 Series (1/2T)	5,590	76	89	68
Chevrolet	10 Series (1/2T)	21,950	76	90	68
Ford	F-150 (1/2-3/4T) 4x4	14,155	68	104	71
Ford	F-150 (1/2-3/4T)	20,266	68	105	72
Ford	F-250 Super Cab 4x4	2,192	68	108	74
Dodge	Dakota (1/2T) 4x4	2,614	76	100	76
Chevrolet	20 Extended Cab (3/4T) 4x4	1,113	83	98	81
Dodge	W150 (1/2T) 4x4	1,400	78	143	112
Toyota	Xtra Cab 4x4	4,301	92	123	113
Toyota	4Runner	1,444	118	117	138
		UTILITY VEHICLES			
Small Utility Vehicles		24,111	77	117	91
Mitsubishi	Montero 2D 4x4	1,432	71	81	58
Jeep	Wrangler	7,406	73	116	85
Ford	Bronco II 4x4	7,208	75	124	93
Suzuki	Sidekick 4x4	2,026	75	129	97
Ford	Bronco II	3,704	78	133	103
Geo	Tracker 4x4	1,045	99	107	106
Intermediate Utility Vehicles		74,109	77	102	79
Dodge	Ramcharger	1,148	53	104	55
GMC	S15 Jimmy	1,524	74	78	58
Ford	Bronco	7,689	69	95	65
Chevrolet	K10 Blazer (1/2T)	2,766	72	95	68
Jeep	Grand Wagoneer	1,170	75	95	71
Isuzu	Trooper II 4x4	2,134	81	92	74
Chevrolet	S10 Blazer	6,790	81	98	79
Jeep	Cherokee 4x4	19,894	70	113	79

Table 7 -- 1989 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		UTILITY VEHICLES (cont'd)			
GMC	T15 Jimmy 4x4	3,925	83	97	80
Chevrolet	T10 Blazer 4x4	16,894	86	97	83
Jeep	Cherokee	2,728	72	115	83
Dodge	Ramcharger 4x4	1,416	72	121	88
Nissan	Pathfinder 4x4	1,127	104	87	91
Toyota	4Runner Wagon	1,931	116	95	110
Large Utility Vehicles		9,025	86	69	59
Chevrolet	Suburban (1/2T)	3,042	96	50	48
Chevrolet	Suburban (1/2T) 4x4	2,413	81	72	58
GMC	Suburban (1/2T)	1,008	85	75	64

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
>$200	5%	40%

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year.
Series with less than 1,000 insured vehicle years of exposure are not summarized.

Table 8
Insurance Losses, Collision Coverages
1988 Models - Vans, Pickups, And Utility Vehicles

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		VANS			
All Vans		143,189	83	66	55
Ford	E-150 Club Wagon (1/2-3/4T)	4,283	73	61	44
Dodge	B250 (3/4T)	1,752	55	88	48
GMC	Safari Cargo Van	4,603	85	57	49
Dodge	B150 (1/2T)	1,145	57	89	51
Chevrolet	Chevy Van (3/4T)	28,718	85	61	52
Ford	E-150 Econoline (1/2-3/4T)	33,841	85	61	52
GMC	Vandura (3/4T)	8,784	89	59	53
Chevrolet	Chevy Van (1/2T)	2,675	68	78	53
Ford	E-250 Econoline (3/4T)	3,727	88	60	53
Chevrolet	Astro Cargo Van	22,853	84	65	55
Dodge	B250 Cargo Van	11,891	66	89	59
Dodge	B150 Cargo Van	3,735	73	81	59
Chevrolet	Sportvan (3/4T)	1,841	97	64	61
Ford	Aerostar Cargo Van	4,162	79	80	63
Dodge	Cargo Minivan	3,560	83	84	70
Toyota	Cargo Van	2,227	114	69	78
		PICKUPS			
Small Pickups		588,241	96	99	95
Dodge	Dakota (1/2T)	30,515	69	87	60
GMC	T15 Extended Cab 4x4	1,634	67	101	67
Mazda	B Series Long Bed	1,784	79	88	69
Isuzu	Long Bed	2,248	80	91	72
Ford	Ranger Super Cab	35,307	86	84	72
Jeep	Comanche	12,329	89	81	72
Jeep	Comanche Long Bed 4x4	2,602	84	89	75
Dodge	D150 (1/2T)	17,205	76	100	75
Mazda	B Series Cab Plus	9,887	95	80	76
Chevrolet	T10 Extended Cab 4x4	7,285	82	92	76
Chevrolet	T10 4x4	9,802	74	104	77
Chevrolet	S10 Extended Cab	7,100	84	93	77
Jeep	Comanche Long Bed	1,883	87	90	78
Dodge	Ram50 Extended Cab 4x4	2,340	96	83	80
GMC	S15 Extended Cab	1,976	90	94	84
Mazda	B Series Standard Bed	29,505	97	87	85
Chevrolet	S10	75,311	94	94	88
Mazda	B Series Standard Bed 4x4	1,552	89	99	89

Table 8 -- 1988 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		PICKUPS (cont'd)			
Jeep	Comanche 4x4	4,164	85	105	90
Dodge	Ram50 Extended Cab	5,136	97	93	90
Mitsubishi	Extended Cab	1,820	113	80	90
GMC	T15 4x4	1,882	81	112	90
Nissan	King Cab	5,832	104	88	92
GMC	S15	15,231	93	100	93
Toyota	Xtra Cab Long Bed	4,085	109	85	93
Dodge	Ram50	11,607	99	94	94
Mitsubishi	Standard Bed	14,282	104	90	94
Ford	Ranger	92,720	98	103	101
Dodge	Ram50 Long Bed	3,314	106	96	102
Toyota	Long Bed (1/2T)	4,353	111	93	103
Toyota	Standard Bed	39,657	117	91	107
Ford	Ranger Super Cab 4x4	19,791	92	116	107
Isuzu	88 1/2 Standard Bed	6,256	111	99	109
Toyota	Long Bed (1/2T) 4x4	2,376	96	115	111
Toyota	Xtra Cab 4x4	12,354	100	112	112
Isuzu	88 1/2 Standard Bed 4x4	1,008	109	104	113
Nissan	King Cab 4x4	4,268	100	119	118
Nissan	Standard Bed 4x4	5,027	110	108	119
Nissan	Standard Bed	21,592	120	100	119
Dodge	Ram50 4x4	3,591	101	119	120
Ford	Ranger 4x4	18,188	104	128	134
Toyota	Standard Bed 4x4	32,357	113	126	142
Standard Pickups		462,933	71	92	65
Ford	F-150 Super Cab	17,431	66	76	50
Chevrolet	10 Extended Cab (1/2T)	10,239	82	63	52
Chevrolet	20 Extended Cab (3/4T) 4x4	3,444	75	69	52
Ford	F-250 Super Cab	6,693	70	75	53
Ford	F-250 Super Cab 4x4	5,427	68	82	56
Ford	F-150 Super Cab 4x4	6,466	69	85	59
GMC	1500 Series (1/2T) 4x4	12,342	67	89	60
Ford	F-250 (3/4T)	11,883	67	91	60
GMC	1500 Extended Cab	2,750	87	69	60
Chevrolet	10 Series (1/2T) 4x4	44,555	62	98	60
GMC	1500 Series (1/2T)	28,848	67	92	62
Chevrolet	10 Series (1/2T)	103,129	70	89	62
Ford	F-150 (1/2-3/4T)	78,999	69	90	62
Dodge	Dakota (1/2T) 4x4	13,302	68	94	63
Chevrolet	20 Series (3/4T)	10,968	79	84	66
Chevrolet	20 Extended Cab (3/4T)	3,185	83	81	68
Chevrolet	20 Series (3/4T) 4x4	14,433	75	92	68
GMC	2500 Series (3/4T)	3,469	84	82	69
Ford	F-150 (1/2-3/4T) 4x4	42,725	68	104	71

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		PICKUPS (cont'd)			
Chevrolet	10 Extended Cab (1/2T) 4x4	3,413	85	84	72
GMC	2500 Series (3/4T) 4x4	4,401	77	97	74
Ford	F-250 (3/4T) 4x4	17,350	74	101	75
Dodge	D250 (3/4T)	1,244	79	101	80
Dodge	W250 (3/4T) 4x4	1,467	89	99	88
Dodge	W150 (1/2T) 4x4	6,226	82	134	110
Toyota	4Runner	4,955	125	111	139
		UTILITY VEHICLES			
Small Utility Vehicles		141,495	80	113	89
Suzuki	Samurai Van	3,902	76	88	67
Suzuki	Samurai	32,809	85	94	80
Mitsubishi	Montero 4x4	3,673	82	100	82
Jeep	Wrangler	19,823	68	122	83
Ford	Bronco II	21,839	79	122	96
Ford	Bronco II 4x4	54,592	81	121	97
Dodge	Raider	4,854	83	120	99
Intermediate Utility Vehicles		279,442	77	102	79
Ford	Bronco	25,567	65	97	63
Dodge	Ramcharger	4,328	65	97	63
Jeep	Cherokee	10,180	65	106	69
Jeep	Wagoneer	4,618	63	111	70
Chevrolet	S10 Blazer	22,271	74	95	70
Chevrolet	K10 Blazer (1/2T)	10,624	69	105	72
GMC	Jimmy (1/2T)	2,822	61	121	73
Jeep	Cherokee 4x4	68,853	71	105	75
Chevrolet	T10 Blazer 4x4	48,955	81	93	75
GMC	S15 Jimmy	6,569	76	99	76
Isuzu	Trooper II 4x4	23,851	86	94	81
GMC	T15 Jimmy 4x4	13,207	80	101	81
Toyota	Land Cruiser	3,297	82	104	86
Dodge	Ramcharger 4x4	4,403	74	129	96
Jeep	Grand Wagoneer	6,010	74	139	103
Toyota	4Runner Wagon	10,006	111	107	118
Nissan	Pathfinder	12,501	104	115	120
Range Rovr	Range Rover	1,372	114	168	191
Large Utility Vehicles		35,499	73	85	62
GMC	Suburban (1/2T)	4,189	68	73	50
Chevrolet	Suburban (1/2T)	12,919	73	79	57
Chevrolet	Suburban (1/2T) 4x4	8,384	73	81	59

Table 8 -- 1988 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		UTILITY VEHICLES (cont'd)			
GMC	Suburban (1/2T) 4x4	2,932	72	88	63
Chevrolet	Suburban (3/4T) 4x4	2,368	77	95	74
Chevrolet	Suburban (3/4T)	3,100	74	115	85

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
>$200	5%	40%

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year.
Series with less than 1,000 insured vehicle years of exposure are not summarized.

Table 9
Insurance Losses, Collision Coverages
1987 Models - Vans, Pickups, and Utility Vehicles

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		VANS			
All Vans		298,036	80	73	58
Dodge	B150 (1/2T)	6,769	64	76	49
Chevrolet	Chevy Van (1/2T)	4,723	75	66	50
GMC	Rally Wagon (3/4T)	1,228	89	58	51
Chevrolet	Sportvan (3/4T)	4,015	68	75	52
Ford	E-150 Econoline (1/2-3/4T)	67,571	81	64	52
Ford	E-250 Econoline (3/4T)	5,219	73	73	53
Chevrolet	Chevy Van (3/4T)	54,112	80	67	54
GMC	Safari Cargo Van	6,894	87	62	54
Ford	E-150 Club Wagon (1/2-3/4T)	8,069	72	75	54
Dodge	B250 Cargo Van	30,894	66	84	55
Chevrolet	Astro Cargo Van	33,794	82	68	56
Dodge	B150 Cargo Van	10,213	65	88	57
Dodge	B250 (3/4T)	7,710	64	89	57
Ford	Aerostar Cargo Van	9,260	72	87	63
GMC	Vandura (3/4T)	14,760	90	72	65
Dodge	Cargo Minivan	6,025	80	88	70
Volkswagen	Vanagon Camper	3,539	110	68	74
Toyota	Cargo Van 4x4	1,974	100	77	77
Ford	E-250 Club Wagon (3/4T)	1,205	80	108	86
Toyota	Cargo Van	17,166	106	88	94
Mitsubishi	Cargo Van	1,804	142	86	122
		PICKUPS			
Small Pickups		1,168,421	91	95	86
Dodge	Dakota (1/2T)	74,699	65	87	57
Jeep	Comanche	16,222	84	74	62
Jeep	Comanche Long Bed	2,312	88	71	63
Chevrolet	El Camino	9,997	73	87	63
GMC	T15 4x4	7,471	74	90	67
Ford	Ranger Super Cab	39,493	86	79	68
Dodge	D150 (1/2T)	37,998	74	92	68
Mazda	B Series Long Bed	20,805	91	77	70
Mazda	B Series Cab Plus	46,926	88	80	70
GMC	Caballero	1,172	67	105	71
GMC	S15	24,969	83	87	72
Jeep	Comanche Long Bed 4x4	3,913	83	90	75
Isuzu	Long Cab (1/2T)	2,555	95	81	77

Table 9 -- 1987 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		PICKUPS (cont'd)			
Toyota	Xtra Cab	1,408	103	76	78
Chevrolet	T10 4x4	31,785	78	101	78
Mazda	B Series Standard Bed	83,933	93	85	79
Isuzu	Standard Bed	21,779	94	85	79
Chevrolet	S10	114,810	88	91	79
Jeep	Comanche 4x4	5,295	81	99	80
Dodge	Ram50 Long Bed	14,949	90	89	80
Ford	Ranger	120,838	86	95	82
Isuzu	Long Bed	2,872	95	87	82
Dodge	Ram50 Long Bed 4x4	4,268	84	100	84
Nissan	Long Bed	1,762	99	88	86
Isuzu	Standard Bed 4x4	1,582	87	102	88
Dodge	Ram50	31,585	94	96	90
Toyota	Long Bed (1/2T) 4x4	6,032	87	103	90
Nissan	King Cab	21,205	94	97	91
Nissan	King Cab 4x4	11,666	89	104	93
Mitsubishi	Standard Bed	22,708	104	90	94
Ford	Ranger Super Cab 4x4	26,943	90	106	95
Nissan	Standard Bed	89,936	100	96	96
Mitsubishi	Standard Bed 4x4	2,840	107	91	97
Mazda	B Series Standard Bed 4x4	9,991	98	103	100
Mitsubishi	Long Bed	1,579	109	94	102
Toyota	Xtra Cab 4x4	25,405	94	110	103
Mazda	B Series Long Bed 4x4	1,296	95	109	104
Dodge	Ram50 4x4	9,389	90	116	105
Toyota	Standard Bed	81,499	109	97	106
Toyota	Xtra Cab Long Bed	14,814	114	94	107
Mazda	B Series Cab Plus 4x4	3,886	107	103	111
Toyota	Long Bed (1/2T)	16,602	118	94	111
Nissan	Standard Bed 4x4	9,150	102	113	115
Ford	Ranger 4x4	35,689	94	123	116
Toyota	Standard Bed 4x4	50,736	101	120	121
Standard Pickups		467,528	70	99	69
Ford	F-250 Super Cab	8,787	65	69	45
GMC	2500 Series (3/4T)	2,549	61	76	47
Chevrolet	20 Series (3/4T) 4x4	10,047	61	78	48
Ford	F-150 Super Cab	22,069	63	84	53
Ford	F-250 Super Cab 4x4	6,860	59	91	54
Chevrolet	20 Series (3/4T)	8,603	58	93	54
Ford	F-150 (1/2-3/4T)	105,719	67	92	61
GMC	1500 Series (1/2T)	18,786	67	92	62
Ford	F-250 (3/4T)	15,410	64	100	63
Ford	F-250 (3/4T) 4x4	19,315	64	100	64

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		PICKUPS (cont'd)			
Ford	F-150 (1/2-3/4T) 4x4	50,357	65	99	65
Chevrolet	10 Series (1/2T) 4x4	36,774	66	101	67
Dodge	Dakota (1/2T) 4x4	21,071	67	101	67
Chevrolet	10 Series (1/2T)	73,671	67	100	68
Dodge	D250 (3/4T)	2,668	78	87	68
GMC	1500 Series (1/2T) 4x4	9,041	66	105	69
Ford	F-150 Super Cab 4x4	4,099	80	98	78
GMC	2500 Series (3/4T) 4x4	3,154	70	113	78
Dodge	W150 (1/2T) 4x4	14,058	76	113	86
Dodge	W250 (3/4T) 4x4	3,234	85	118	100
Toyota	4Runner	29,953	116	114	132
		UTILITY VEHICLES			
Small Utility Vehicles		232,553	78	113	88
Jeep	Wrangler	34,733	61	115	70
Suzuki	Samurai	52,231	83	93	78
Suzuki	Samurai Van	13,669	79	102	81
Dodge	Raider	20,017	74	122	90
Mitsubishi	Montero 4x4	10,537	74	124	91
Ford	Bronco II	22,546	79	126	100
Ford	Bronco II 4x4	78,817	83	122	100
Intermediate Utility Vehicles		433,174	76	105	80
Jeep	Cherokee	11,119	62	100	61
Ford	Bronco	31,341	65	99	64
GMC	Jimmy (1/2T)	6,062	63	107	68
Chevrolet	S10 Blazer	46,467	77	93	71
Chevrolet	K10 Blazer (1/2T)	22,305	65	112	72
GMC	S15 Jimmy	9,805	73	101	73
Dodge	Ramcharger	8,761	68	109	75
Jeep	Wagoneer	10,697	68	112	76
Chevrolet	T10 Blazer 4x4	95,914	78	99	77
GMC	T15 Jimmy 4x4	21,793	78	102	79
Jeep	Cherokee 4x4	80,200	75	107	80
Jeep	Grand Wagoneer	10,247	73	110	81
Toyota	Land Cruiser	4,252	74	116	86
Dodge	Ramcharger 4x4	11,113	75	116	87
Isuzu	Trooper II 4x4	24,052	84	105	88
Nissan	Pathfinder	35,124	97	124	120
Range Rovr	Range Rover	1,014	105	144	150
Toyota	4Runner Wagon	2,901	122	124	151

Table 9 -- 1987 Models (Cont'd)

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		UTILITY VEHICLES (cont'd)			
Large Utility Vehicles		51,467	69	81	56
GMC	Suburban (3/4T) 4x4	1,225	56	76	43
Chevrolet	Suburban (1/2T)	19,838	69	68	46
Chevrolet	Suburban (1/2T) 4x4	9,980	72	71	51
GMC	Suburban (1/2T) 4x4	4,057	61	84	51
GMC	Suburban (1/2T)	6,581	68	81	55
GMC	Suburban (3/4T)	1,735	61	118	72
Chevrolet	Suburban (3/4T) 4x4	2,918	79	105	83
Chevrolet	Suburban (3/4T)	5,130	70	127	89

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
>$200	5%	40%

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year.
Series with less than 1,000 insured vehicle years of exposure are not summarized.

Appendix A-1

1987-89 Vehicle Series Designations

Passenger Cars

Make Name	Series Name	Body Style	Vehicle Size Class		
			1987	1988	1989
Acura	Integra	2Dr, 4Dr	S	S	S
	Legend*	2Dr, 4Dr	M	M	M
Alfa Romeo	Milano	4Dr	S	S	S
	Spider*	Conv	S	S	S
American	Eagle	4Dr(4), SW	M	M	
Aston Martin*	Lagonda	4Dr	L	L	L
	Saloon	2Dr	M	M	M
	Vantage	2Dr	M	M	M
	Volante	Conv	M	M	M
Audi	80*	4Dr		M	M
	80 Quattro*	4Dr		M	M
	90*	4Dr		M	M
	90 Quattro*	4Dr		M	M
	100*	4Dr, SW			M
	100 Quattro*	4Dr			M
	200*	4Dr			M
	200 Quattro*	4Dr, SW			M
	4000	4Dr	M		
	4000 Quattro*	4Dr	S		
	5000*	4Dr, SW	M	M	
	5000 Quattro*	4Dr, SW	M	M	
	GT Coupe	2Dr	M		
Austin Rover*	Sterling 825/827	4Dr	M	M	M
Avanti*	Avanti	2Dr, Conv	M	M	M
Bentley*	Continental	Conv	L	L	L
	Eight	4Dr	L	L	L
	Mulsanne	4Dr	L	L	L
	Mulsanne-L	4Dr	L		
	Turbo R	4Dr			L

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Bertone*	X 1/9	Conv	S	S	S
BMW*	325e	2Dr, 4Dr	M	M	
	325i	2Dr, 4Dr, Conv	M	M	M
	325iX	2Dr, 4Dr		M	M
	524TD	4Dr	M		
	525i	4Dr			M
	528e	4Dr	M	M	
	535i	4Dr	M	M	M
	635CSI	2Dr	M	M	M
	735i	4Dr	L	L	L
	735iL	4Dr		L	L
	750iL	4Dr		L	L
	L7	4Dr	L		
	M3	2Dr		M	M
	M5	4Dr		M	
	M6	2Dr	M	M	
Buick	Century	2Dr, 4Dr, SW	M	M	M
	Electra	2Dr(4), 4Dr, SW	L	L	L
	LeSabre	2Dr, 4Dr, SW	L	L	L
	Reatta*	2Dr		S	S
	Regal	2Dr	M		
	Regal FWD	2Dr		M	M
	Riviera*	2Dr	M	M	M
	Skyhawk	2Dr, 4Dr, SW	M	M	M
	Skylark	2Dr(3), 4Dr	M	M	M
	Somerset	2Dr	M		
Cadillac	Allante*	Conv	S	S	S
	Brougham*	4Dr	L	L	L
	Cimarron	4Dr	M	M	
	DeVille*	2Dr, 4Dr	L	L	L
	Eldorado*	2Dr	M	M	M
	Fleetwood*	2Dr(1), 4Dr	L	L	L
	Fleetwood Limo*	4Dr	L		
	Fleetwood 60 Special*	4Dr	L	L	
	Seville*	4Dr	M	M	M
Chevrolet	Astro Van	PV	L	L	L
	Beretta	2Dr	M	M	M
	Camaro*	2Dr, Conv	M	M	M
	Caprice	2Dr, 4Dr, SW	L	L	L
	Cavalier	2Dr, 4Dr, SW, Conv*	M	M	M
	Celebrity	2Dr(6), 4Dr, SW	M	M	M
	Chevette	2Dr, 4Dr	S		

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Chevrolet (cont'd)	Corsica	4Dr	M	M	M
	Corvette*	2Dr, Conv	S	S	S
	Metro	2Dr, 4Dr			S
	Monte Carlo	2Dr	M	M	
	Nova	4Dr	S	S	
	Prizm	4Dr			S
	Spectrum	2Dr, 4Dr	S	S	S
	Sprint	2Dr, 4Dr	S	S	S
Chrysler	Daytona	2Dr	S	S	S
	Dynasty	4Dr		M	M
	LeBaron	2Dr, 4Dr(6), SW(6),Conv*	M	M	M
	LeBaron (H Body)	4Dr	M	M	M
	New Yorker (C Body)	4Dr		M	M
	New Yorker (E Body)	4Dr	M	M	
	New Yorker 5th Ave	4Dr	L	L	L
	Newport	4Dr	L	L	L
	TC*	Conv			S
Chrysler/ Plymouth/ Mitsubishi	Colt	2Dr, 4Dr(6), SW(3)	S	S	S
	Colt Vista	SW	M	M	M
	Colt Vista 4WD	SW	M	M	M
	Colt 4WD	SW			S
	Conquest	2Dr	S	S	S
Daihatsu	Charade	2Dr		S	S
Dodge	600	4Dr	M	M	
	Aries	2Dr, 4Dr, SW(6)	M	M	M
	Caravan	PV	L	L	L
	Charger	2Dr	S		
	Daytona	2Dr	S	S	S
	Diplomat	4Dr	L	L	L
	Dynasty	4Dr		M	M
	Grand Caravan	PV		L	L
	Lancer	4Dr	M	M	M
	Omni	4Dr	S	S	S
	Shadow	2Dr, 4Dr	S	S	S
	Shelby	2Dr	S		
	Spirit	4Dr			M
Dodge/ Mitsubishi	Colt	2Dr, 4Dr(6), SW(3)	S	S	S
	Colt Vista	SW	M	M	M
	Colt Vista 4WD	SW	M	M	M
	Colt 4WD	SW			S

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Eagle	Medallion	4Dr, SW		M	M
	Premier	4Dr		M	M
	Summit	4Dr			S
Ferrari*	328 GTB/GTS	2Dr, Conv	S	S	S
	Mondial	2Dr, Conv	M	M	M
	Testarossa	2Dr	M	M	M
Ford	Aerostar	PV	L	L	L
	Crown Victoria	2Dr(4), 4Dr, SW	L	L	L
	Escort+	2Dr, 4Dr, SW		S	S
	Escort++	2Dr, 4Dr, SW	S	S	
	Escort EXP*+	2Dr		S	
	Extended Aerostar	PV			L
	EXP*++	2Dr	S	S	
	Festiva	2Dr		S	S
	Mustang*	2Dr, Conv	M	M	M
	Probe	2Dr			S
	Taurus	4Dr, SW	M	M	M
	Tempo	2Dr, 4Dr	M	M	M
	Tempo 4WD	2Dr, 4Dr	M	M	M
	Thunderbird	2Dr	M	M	L
GMC	Safari Van	PV	L	L	L
Honda	Accord	2Dr, 4Dr	M	M	M
	Civic	2Dr, 4Dr, SW	S	S	S
	Civic CRX*	2Dr	S	S	S
	Civic 4WD	SW	S	S	S
	Prelude	2Dr	S	M	M
Hyundai	Excel	2Dr, 4Dr	S	S	S
	Sonata	4Dr			M
Isuzu	I-Mark	2Dr, 4Dr	S	S	S
	Impulse	2Dr	S	S	S
Jaguar*	XJ6	4Dr	L	L	L
	XJ-S	2Dr, Conv(1)	M	M	M
	XJ-SC	2Dr	M	M	
Lamborghini*	Countach	2Dr	S	S	S

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Lincoln*	Continental	4Dr	M	M	M
	Mark VII	2Dr	M	M	M
	Town Car	4Dr	L	L	L
Lotus*	Esprit Turbo	2Dr	S	S	S
Maserati*	425/430	4Dr	M	M	M
	Biturbo/228	2Dr	S	S	S
	Spyder	Conv	S	S	S
Mazda	323	2Dr, 4Dr, SW	S	S	S
	323 4WD	2Dr		S	S
	626	2Dr(4), 4Dr	S	M	M
	929	4Dr		M	M
	MX-6	2Dr	S	S	S
	RX-7*	2Dr, Conv(3)	S	S	S
	Wagon	SW			L
	Wagon 4WD	SW			L
Mercedes-Benz*	190D	4Dr	M	M	M
	190E	4Dr	M	M	M
	260E	4Dr	L	L	L
	300CE	2Dr		M	M
	300D	4Dr	L		
	300E	4Dr	L	L	L
	300SDL	4Dr	L		
	300SE	4Dr		L	L
	300SEL	4Dr		L	L
	300TD	SW	L		
	300TE	SW		L	L
	420SEL	4Dr	L	L	L
	560SEC	2Dr	L	L	L
	560SEL	4Dr	L	L	L
	560SL	Conv	S	S	S
Mercury	Cougar	2Dr	M	M	L
	Grand Marquis	2Dr(4), 4Dr, SW	L	L	L
	Lynx	2Dr, 4Dr, SW	S		
	Sable	4Dr, SW	M	M	M
	Topaz	2Dr, 4Dr	M	M	M
	Tracer	2Dr, 4Dr, SW(3)	S	S	S
Merkur	Scorpio*	4Dr	M	M	M
	XR4TI	2Dr	M	M	M

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Mitsubishi	Cordia	2Dr	S	S	
	Galant	4Dr	M		M
	Mirage	2Dr, 4Dr	S	S	S
	Precis	2Dr, 4Dr		S	S
	Sigma	4Dr		M	M
	Starion	2Dr	S	S	S
	Tredia	4Dr	S	S	
	Wagon	SW	S	S	S
Nissan	200SX	2Dr	S	S	
	240SX	2Dr			S
	300ZX*	2Dr	S	S	S
	300ZX 2+2*	2Dr	S	S	S
	Maxima	4Dr, SW(6)	M	M	M
	Pulsar	2Dr	S	S	S
	Sentra	2Dr, 4Dr, SW	S	S	S
	Sentra 4WD	SW	S	S	S
	Stanza	4Dr	M	M	M
	Stanza	SW	S	S	
	Stanza 4WD	SW	S	S	
	Van	PV	S	S	
Oldsmobile	Calais	2Dr, 4Dr	M	M	M
	Custom Cruiser	SW	L	L	L
	Cutlass Ciera	2Dr, 4Dr, SW	M	M	M
	Cutlass Supreme FWD	2Dr		M	M
	Cutlass Supreme RWD	2Dr, 4Dr(4)	M	M	
	Eighty-Eight	2Dr, 4Dr	L	L	L
	Firenza	2Dr, 4Dr, SW	M	M	
	Ninety-Eight	2Dr(4), 4Dr	L	L	L
	Toronado*	2Dr	M	M	M
Panther*	Kallista	Conv		M	M
Peugeot	405	4Dr			M
	505	4Dr	M	M	M
	505	SW	L	L	L
Plymouth	Acclaim	4Dr			M
	Caravelle	4Dr	M	M	
	Gran Fury	4Dr	L	L	L
	Grand Voyager	PV		L	L
	Horizon	4Dr	S	S	S

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Plymouth (cont'd)	Reliant	2Dr, 4Dr, SW(6)	M	M	M
	Sundance	2Dr, 4Dr	S	S	S
	Turismo	2Dr	S		
	Voyager	PV	L	L	L
Pontiac	1000	2Dr, 4Dr	S		
	6000	2Dr(4), 4Dr, SW	M	M	M
	6000 4WD	4Dr			M
	Bonneville	4Dr	L	L	L
	Fiero*	2Dr	S	S	
	Firebird*	2Dr	M	M	M
	Grand Am	2Dr, 4Dr	M	M	M
	Grand Prix	2Dr	M	M	M
	Lemans	2Dr, 4Dr		S	S
	Safari Wagon	SW	L	L	L
	Sunbird	2Dr, 4Dr, SW(6), Conv*	M	M	M
Porsche*	911 Coupe	2Dr	S	S	S
	911 Targa/Cabriolet	2Dr	S	S	S
	911 4WD	2Dr			S
	924 Coupe	2Dr	S	S	
	928 Coupe	2Dr	S	S	S
	944 Coupe	2Dr, Conv(1)	S	S	S
Renault	Alliance	2Dr, 4Dr, Conv*	S		
	GTA	2Dr, Conv*	S		
Rolls Royce*	Camargue	2Dr	L		
	Corniche	Conv	L	L	L
	Silver Spirit	4Dr	L	L	L
	Silver Spur	4Dr	L	L	L
Saab	900	2Dr, 4Dr, Conv*	S	S	S
	9000*	4Dr	M	M	M
Subaru	DL/GL	2Dr, 4Dr, SW	S	S	S
	DL/GL 4WD	SW	S	S	S
	GL 4WD	2Dr, 4Dr	S	S	S
	Hatchback	2Dr	S	S	S
	Hatchback 4WD	2Dr	S	S	S
	Justy	2Dr	S	S	S
	Justy 4WD	2Dr		S	S
	XT Coupe	2Dr	S	S	S
	XT Coupe 4WD	2Dr	S	S	S
	XT Coupe DL*	2Dr	S	S	

Make Name	Series Name	Body Style	Vehicle Size Class 1987	1988	1989
Suzuki	Forsa	2Dr, 4Dr	S	S	
	Swift	2Dr, 4Dr			S
Toyota	Camry	4Dr, SW	M	M	M
	Camry 4WD	4Dr		M	M
	Celica	2Dr, Conv*	S	S	S
	Celica 4WD	2Dr		S	S
	Corolla	2Dr, 4Dr, SW(3)	S	S	S
	Corolla 4WD	4Dr(1), SW		S	S
	Corolla FX	2Dr	S	S	
	Cressida	4Dr, SW(4)	M	M	M
	MR2*	2Dr	S	S	S
	Supra*	2Dr	M	M	M
	Tercel	2Dr, 4Dr, SW(4)	S	S	S
	Tercel 4WD	SW	S	S	
	Van	PV	S	S	S
	Van 4WD	PV	S	S	S
TVR*	280i	2Dr, Conv	S	S	S
Volkswagen	Cabriolet*	Conv	S	S	S
	Fox	2Dr, 4Dr, SW	S	S	S
	Golf	2Dr, 4Dr	S	S	S
	GTI	2Dr	S	S	S
	Jetta	2Dr, 4Dr	S	S	S
	Quantum	4Dr, SW	M	M	
	Quantum 4WD	SW	M	M	
	Scirocco	2Dr	S	S	
	Vanagon	PV	S	S	S
Volvo	240	4Dr, SW	M	M	M
	740*	4Dr, SW		M	M
	740/760*	4Dr, SW	M		
	760*	4Dr, SW		M	M
	780*	2Dr	M	M	M
Yugo	Yugo	2Dr	S	S	S

Size Class:

Small - wheelbase (after rounding to nearest inch) less than 100
Midsize - wheelbase (after rounding to nearest inch) in the range 100-109
Large - wheelbase (after rounding to nearest inch) greater than 109

Appendix A-1 Notes:

1. 1989 models only
2. 1988 models only
3. 1988 and 1989 models only
4. 1987 models only
5. 1987 and 1989 models only
6. 1987 and 1988 models only

* These cars are classified as sports or specialty models.
\+ 1988 models include only those built in the second half of the model year.
++ 1988 models include only those built in the first half of the model year.

Body Style Abbreviations:

2Dr - Two-door
4Dr - Four-door
Conv - Convertible
PV - Passenger Van
SW - Station Wagon

Appendix A-2

1987-89 Vehicle Series Designations

Vans, Pickups, and Utility Vehicles

Make	Series Name	Vehicle Type	Size Class	Model Years
Chevrolet	Astro Cargo Van	Van		87-89
	Chevy Van (1/2T)	Van		87-89
	Chevy Van (3/4T)	Van		87-89
	Sportvan (1/2T)	Van		87-89
	Sportvan (3/4T)	Van		87-89
	El Camino	Pickup	Small	87
	S10	Pickup	Small	87-89
	S10 Extended Cab	Pickup	Small	87-89
	T10 Extended Cab 4x4	Pickup	Small	87-89
	T10 4x4	Pickup	Small	87-89
	10 Extended Cab (1/2T)	Pickup	Standard	88-89
	10 Extended Cab (1/2T) 4x4	Pickup	Standard	88-89
	10 Series (1/2T)	Pickup	Standard	87-89
	10 Series (1/2T) 4x4	Pickup	Standard	87-89
	20 Crew Cab (3/4T)	Pickup	Standard	87-89
	20 Extended Cab (3/4T)	Pickup	Standard	88-89
	20 Extended Cab (3/4T) 4x4	Pickup	Standard	88-89
	20 Series (3/4T)	Pickup	Standard	87-89
	20 Series (3/4T) 4x4	Pickup	Standard	87-89
	Tracker 4x4	Util.Veh.	Small	89
	K10 Blazer (1/2T)	Util.Veh.	Intermediate	87-89
	S10 Blazer	Util.Veh.	Intermediate	87-89
	T10 Blazer 4x4	Util.Veh.	Intermediate	87-89
	Suburban (1/2T)	Util.Veh.	Large	87-89
	Suburban (1/2T) 4x4	Util.Veh.	Large	87-89
	Suburban (3/4T)	Util.Veh.	Large	87-89
	Suburban (3/4T) 4x4	Util.Veh.	Large	87-89
Dodge	B150 (1/2T)	Van		87-89
	B150 Cargo Van	Van		87-89
	B250 (3/4T)	Van		87-89
	B250 Cargo Van	Van		87-89
	Extended Cargo Minivan	Van		88-89
	Cargo Minivan	Van		87-89
	Dakota (1/2T)	Pickup	Small	87-89
	D150 (1/2T)	Pickup	Small	87-89
	Ram50	Pickup	Small	87-89
	Ram50 4x4	Pickup	Small	87-89
	Ram50 Extended Cab	Pickup	Small	88-89
	Ram50 Extended Cab 4x4	Pickup	Small	88-89
	Ram50 Long Bed	Pickup	Small	87-89
	Ram50 Long Bed 4x4	Pickup	Small	87-89
	Dakota (1/2T) 4x4	Pickup	Standard	87-89
	D250 (3/4T)	Pickup	Standard	87-89
	W150 (1/2T) 4x4	Pickup	Standard	87-89
	W250 (3/4T) 4x4	Pickup	Standard	87-89
	Raider	Util.Veh.	Small	87-89
	Ramcharger	Util.Veh.	Intermediate	87-89
	Ramcharger 4x4	Util.Veh.	Intermediate	87-89

Make	Series Name	Vehicle Type	Size Class	Model Years
Ford	Aerostar Cargo Van	Van		87-89
	Aerostar Extended Cargo Van	Van		89
	E-150 Club Wagon (1/2-3/4T)	Van		87-89
	E-150 Econoline (1/2-3/4T)	Van		87-89
	E-250 Club Wagon (3/4T)	Van		87-89
	E-250 Econoline (3/4T)	Van		87-89
	Courier	Pickup	Small	87-89
	Courier 4x4	Pickup	Small	87-89
	Ranger	Pickup	Small	87-89
	Ranger 4x4	Pickup	Small	87-89
	Ranger Super Cab	Pickup	Small	87-89
	Ranger Super Cab 4x4	Pickup	Small	87-89
	F-150 (1/2-3/4T)	Pickup	Standard	87-89
	F-150 (1/2-3/4T) 4x4	Pickup	Standard	87-89
	F-150 Super Cab	Pickup	Standard	87-89
	F-150 Super Cab 4x4	Pickup	Standard	87-89
	F-250 (3/4T)	Pickup	Standard	87-89
	F-250 (3/4T) 4x4	Pickup	Standard	87-89
	F-250 Super Cab	Pickup	Standard	87-89
	F-250 Super Cab 4x4	Pickup	Standard	87-89
	Bronco II	Util.Veh.	Small	87-89
	Bronco II 4x4	Util.Veh.	Small	87-89
	Bronco	Util.Veh.	Intermediate	87-89
GMC	Rally Wagon (1/2T)	Van		87-89
	Rally Wagon (3/4T)	Van		87-89
	Safari Cargo Van	Van		87-89
	Vandura (1/2T)	Van		87-89
	Vandura (3/4T)	Van		87-89
	Caballero	Pickup	Small	87
	S15	Pickup	Small	87-89
	S15 Extended Cab	Pickup	Small	87-89
	T15 Extended Cab 4x4	Pickup	Small	87-89
	T15 4x4	Pickup	Small	87-89
	1500 Extended Cab	Pickup	Standard	88-89
	1500 Extended Cab 4x4	Pickup	Standard	88-89
	1500 Series (1/2T)	Pickup	Standard	87-89
	1500 Series (1/2T) 4x4	Pickup	Standard	87-89
	2500 Crew Cab (3/4T)	Pickup	Standard	87-89
	2500 Extended Cab	Pickup	Standard	88-89
	2500 Extended Cab 4x4	Pickup	Standard	88-89
	2500 Series (3/4T)	Pickup	Standard	87-89
	2500 Series (3/4T) 4x4	Pickup	Standard	87-89
	Jimmy (1/2T)	Util.Veh.	Intermediate	87-89
	S15 Jimmy	Util.Veh.	Intermediate	87-89
	T15 Jimmy 4x4	Util.Veh.	Intermediate	87-89
	Suburban (1/2T)	Util.Veh.	Large	87-89
	Suburban (1/2T) 4x4	Util.Veh.	Large	87-89
	Suburban (3/4T)	Util.Veh.	Large	87-89
	Suburban (3/4T) 4x4	Util.Veh.	Large	87-89

Make	Series Name	Vehicle Type	Size Class	Model Years
Isuzu	Long Bed	Pickup	Small	87-89
	Long Bed 4x4	Pickup	Small	87-89
	Long Cab (1/2T)	Pickup	Small	87-89
	Long Cab (1/2T) 4x4	Pickup	Small	87-89
	Standard Bed	Pickup	Small	87-88++
	Standard Bed 4x4	Pickup	Small	87-88++
	Standard Bed	Pickup	Small	88-89+
	Standard Bed 4x4	Pickup	Small	88-89+
	Amigo	Util.Veh.	Small	89
	Amigo 4x4	Util.Veh.	Small	89
	Trooper II 4x4	Util.Veh.	Intermediate	87-89
Jeep	Comanche	Pickup	Small	87-89
	Comanche 4x4	Pickup	Small	87-89
	Comanche Long Bed	Pickup	Small	87-88
	Comanche Long Bed 4x4	Pickup	Small	87-88
	J10 Long Bed	Pickup	Standard	87-88
	J20 Long Bed	Pickup	Standard	87-88
	Wrangler	Util.Veh.	Small	87-89
	Cherokee	Util.Veh.	Intermediate	87-89
	Cherokee 4x4	Util.Veh.	Intermediate	87-89
	Grand Wagoneer	Util.Veh.	Intermediate	87-89
	Wagoneer	Util.Veh.	Intermediate	87-89
Laforza	Laforza SW 4x4	Util.Veh.	Intermediate	89
Lamborghini	LM002 4x4	Util.Veh.	Intermediate	89
Mazda	Van	Van		89
	B Series Cab Plus 4x4	Pickup	Small	87-89
	B Series Long Bed 4x4	Pickup	Small	87-88
	B Series Standard Bed 4x4	Pickup	Small	87-89
	B Series Cab Plus	Pickup	Small	87-89
	B Series Long Bed	Pickup	Small	87-89
	B Series Standard Bed	Pickup	Small	87-89
Mitsubishi	Cargo Van	Van		87-89
	Extended Cab	Pickup	Small	88-89
	Extended Cab 4x4	Pickup	Small	88-89
	Long Bed	Pickup	Small	87-89
	Long Bed 4x4	Pickup	Small	87-89
	Standard Bed	Pickup	Small	87-89
	Standard Bed 4x4	Pickup	Small	87-89
	Montero 2D 4x4	Util.Veh.	Small	87-89
	Montero 4D 4x4	Util.Veh.	Intermediate	89

Make	Series Name	Vehicle Type	Size Class	Model Years
Nissan	King Cab	Pickup	Small	87-89
	King Cab 4x4	Pickup	Small	87-89
	Long Bed	Pickup	Small	87-88
	Long Bed 4x4	Pickup	Small	87-88
	Standard Bed	Pickup	Small	87-89
	Standard Bed 4x4	Pickup	Small	87-89
	Pathfinder	Util.Veh.	Intermediate	89
	Pathfinder 4x4	Util.Veh.	Intermediate	87-89
Range Rover	Range Rover	Util.Veh.	Intermediate	87-89
Subaru	Brat	Pickup	Small	87
Suzuki	Samurai 4x4	Util.Veh.	Small	87-89
	Samurai Van 4x4	Util.Veh.	Small	87-89
	Sidekick Van 4x4	Util.Veh.	Small	89
	Sidekick 4x4	Util.Veh.	Small	89
Toyota	Cargo Van	Van		87-89
	Cargo Van 4x4	Van		87-89
	Long Bed (1/2T)	Pickup	Small	87-89
	Long Bed (1/2T) 4x4	Pickup	Small	87-89
	Standard Bed	Pickup	Small	87-89
	Standard Bed 4x4	Pickup	Small	87-89
	Xtra Cab	Pickup	Small	87-89
	Xtra Cab 4x4	Pickup	Small	87-88
	Xtra Cab Long Bed	Pickup	Small	87-88
	Xtra Cab 4x4	Pickup	Standard	89
	4Runner	Pickup	Standard	87-89
	Land Cruiser	Util.Veh.	Intermediate	87-89
	4Runner Wagon	Util.Veh.	Intermediate	87-89
Volkswagen	Vanagon Camper	Van		87-89

\+ 1988 models include only those built in the second half of the model year.
++ 1988 models include only those built in the first half of the model year.

Appendix B
Definitions

Average Loss Payment per Claim - The total of all loss payments made for the claims for a group of vehicles, divided by the number of claims paid.

Average Loss Payment per Insured Vehicle Year - For a group of vehicles, the product of Claim Frequency and Average Loss Payment per Claim, expressed as dollars per insured vehicle year. It should be noted that this definition differs from the commonly used insurance term, pure premium, but yields similar results.

Claim Frequency - The number of claims for a group of vehicles, divided by the exposure for that group.

Collision Coverages - As defined in insurance contracts, the coverage under which people insure their own vehicle against loss caused by collision.

Deductible Amount - That portion of the collision damage cost borne by the policyholder. For computing results, deductible amounts are split into two groups; less than or equal to $200 (mainly $100 and $200 deductibles) and greater than $200 (mainly $250 and $500 deductibles).

Exposure - The time interval an individual vehicle is insured. Exposure for a group of vehicles is expressed in units of insured vehicle years.

Loss Payment - That portion of the collision damage cost borne by the insurer; in general, the total collision damage cost minus the deductible amount.

Operator Age Group - The factor which distinguishes those vehicles whose rated driver is youthful from those vehicles whose rated driver is not youthful (see Youthful Operator).

Rated Driver - The driver who, for insurance purposes, is considered to represent the greatest loss potential for the insured vehicle.

Vehicle Class - There are four vehicle classes, defined as follows:

1. **Passenger Cars** - There are four major body style groupings of passenger cars -- regular two-door models, regular four-door models, station wagons and passenger vans, and sports and specialty models. Sports or specialty models include all two-seater cars, all convertibles, all midsize and large cars with two or fewer designated rear seating positions, and all luxury cars. Each body style group is further divided into size class subgroups based on wheelbase (rounded to nearest inch) defined as follows:

   Small - Vehicles with wheelbases less than or equal to 99 inches.
   Midsize - Vehicles with wheelbases greater than 99 inches and less than or equal to 109 inches.
   Large - Vehicles with wheelbases greater than 109 inches.

2. **Vans** - Fully enclosed vehicles with either no hood or a very short hood, in which the engine is placed at least 50 percent behind the windshield. The driver's position is usually well forward, nearly beside the engine, usually within the forward 25 percent of the wheelbase. These vehicles are designed for cargo transport and are equipped with a right side cargo access door and rear door. The cargo area is not separated from the passenger area -- both are enclosed under the same roof. Some passenger vans are equipped with additional seats in the cargo area and usually have additional side windows also.

3. **Pickups** - Cargo-carrying vehicles, usually on a truck chassis, with an enclosed cab and a separate open cargo area. The open cargo area generally is a box with raised sides with an opening tailgate. There are also a small number of auto pickups which are similar to regular pickups except that they are built on a passenger car chassis. Pickups are further divided into two subgroups based on curb weight -- small pickups (less than 3,500 pounds) and standard pickups (3,500 pounds or more).

4. **Utility Vehicles** - Vehicles built on a heavy-duty chassis capable of off-road use. They are of conventional construction with the driver behind the engine. The cargo and passenger areas are integral with the driver area. Many of these vehicles are equipped with soft or removable tops. Frequently, these vehicles are equipped with four-wheel drive. Utility vehicles are further divided into three subgroups based on wheelbase -- small utility vehicles (less than 100 inches), intermediate utility vehicles (from 100 to 120 inches), and large utility vehicles (greater than 120 inches).

Vehicle Identification Number (VIN) - A code, variously comprising both numbers and letters; normally, 8 to 17 characters in length, assigned to each vehicle by its manufacturer. The VIN uniquely identifies the vehicle within at least a ten-year time span and, in recent model year vehicles, contains coding which identifies the make, series, model year, and other characteristics of each vehicle.

Vehicle Series - A name denoting a family of vehicles, within a make, with the same wheelbase and a degree of commonality in construction such as body, chassis, etc.

Youthful Operator - For the purposes of this report, all males (married or single) under 25 years of age and all unmarried females under 25 years of age.

Selected Publications

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A-12 *Automobile Insurance Losses, Collision Coverage; An Assessment of the Effects of the Federal Safety Bumper Standard on the Losses for 1972 Through 1978 Models*, June 1980.

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A-14 *Automobile Insurance Losses, Personal Injury Protection and Collision Coverage; Comparisons of the Loss Experience of Two- and Four-Door Cars, 1978, 1979, and 1980 Models*, May 1981.

A-16 *Automobile Insurance Losses, Collision Coverages; The Frequency of Claims Involving Salvage; Subcompact and Compact Cars; 1980 Models*, January 1982.

A-17 *Insurance Losses, Comprehensive Coverage; Non-Crash Fire Losses; 1979-1980 Models*, February 1982.

A-18 *Insurance Losses, Theft Coverage; The Distribution of Theft Loss Payment Amounts; Passenger Cars, Vans, Pickups, and Utility Vehicles; 1981 Models During Their First Year, 1980 Models During Their First Two Years, 1979 Models During Their First Three Years*, June 1982.

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A-20 *Insurance Losses, Collision Coverages, A Comparison of the Collision Loss Experience of Subaru Models with 5 and 2.5 MPH Bumpers*, April 1983.

A-21 *Insurance Losses, Personal Injury Protection Coverages, Injury Claim Frequencies for Volkswagen Rabbits with Automatic and Manual Seat Belts, 1981, and 1982 Models*, April 1984.

A-22 *Insurance Losses, Collision Coverages, An Analysis of Salvage Credits, 1977 Through 1982 Model Year Cars*, July 1984.

A-23 *Injury and Collision Losses by Engine Option, Selected 1983 Models*, October 1985.

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A-25 *Relationships Between Losses and Vehicle Density, 1982-84 Models*, October 1985.

A-26 *Consistency of Model Year Injury Claim Frequency Results for Selected 1981-1983 Models*, May 1986.

A-27 *A Preliminary Evaluation of New York and New Jersey Insurance Injury Claim Results Before and After Enactment of Mandatory Seat Belt Legislation; 1983-85 Models*, May 1986.

A-28 *Insurance Injury Loss Experience in Eight States with Seat Belt Laws, 1983-86 Models*, July 1988.

A-29 *Insurance Losses Based on Garaging Location, 1985-87 Models*, June 1988.

A-30 *Automobile Insurance Losses, A Comparison of California and National Results*, May 1988.

A-31 *The Effect of Vehicle Component Parts Marking on Theft*, December 1989.

A-32 *Automobile Theft Losses By Size of Claim and in Selected States*, December 1989.

A-33 *Noncrash Fire Losses, 1986-88*, December 1989.

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Aetna Casualty & Surety Company of America Aetna Casualty & Surety Company of Illinois Aetna Casualty and Surety Company AgSecurity Insurance Company Alaska Pacific Assurance Company Alfa Mutual General Insurance Company Alfa Mutual Insurance Company Alliance Assurance Company Ltd. 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Insurance Collision Report
HLDI R-90-1

Initial Results for 1990 Automobiles

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Research Report HLDI R90-1; July 1990
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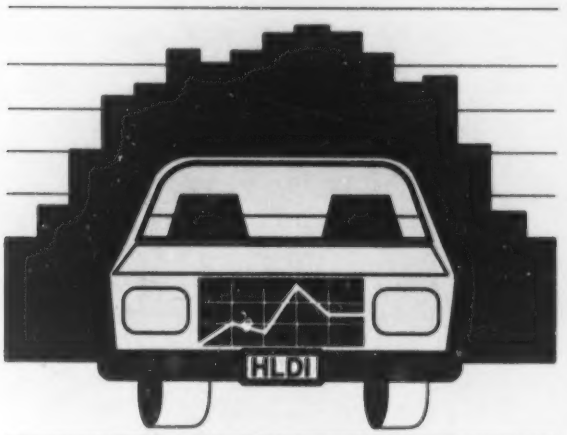

SUMMARY

This Highway Loss Data Institute report presents results of the collision coverage loss experience of 1990 model year passenger vehicles during their first months of availability.

- The 1990 models show large variations in collision loss results among individual vehicle series. Claim frequencies ranged from 5.8 to 15.8 claims per 100 insured vehicle years, average loss payments per claim ranged from $1,169 to $3,870, and average loss payments per insured vehicle year ranged from $79 to $474.

- Even among cars of the same size class and body style, there were large variations in the results for individual vehicle series.

- In each size class, sports and specialty cars had the highest average loss payment per claim.

- Collision coverage claim frequencies varied inversely with car size (i.e., collision claim frequencies tended to decrease with increasing car size).

- The overall average loss payment per claim increased nine percent for 1990 over 1989 models, but the claim frequency decreased by two percent resulting in an increase of $15 in the average loss payment per insured vehicle year.

INTRODUCTION

The Highway Loss Data Institute (HLDI) is a nonprofit public service organization that gathers, processes, and publishes insurance data concerned with human and economic losses resulting from highway crashes and especially with the ways such losses vary among different kinds of vehicles.

This report summarizes the collision coverage loss results of 1990 passenger vehicles during their initial period of exposure -- January 1989 through February 1990. It is based on collision coverage and loss data supplied by 11 insurers: Aetna, Allstate, Fireman's Fund, Kemper, Liberty Mutual, Nationwide, Prudential, Safeco, State Farm, Travelers, and USAA.

Descriptions of the sources and nature of the data used are presented in Appendix A. The data analysis methods are presented in Appendix B and definitions are given in Appendix C. A complete list of vehicle series designations by make and size class appears in Appendix D.

It is intended that the dissemination of this and other HLDI reports will contribute to research into ways for reducing crash damage, crash injuries, and theft losses, and that it will inform the public about differences in the loss experience produced by different kinds of vehicles.

RESULTS AND DISCUSSION

Comparison of Results for Individual Series -- 1990 Models

Table 1 presents detailed collision coverage loss results for 1990 models during their initial exposure period -- January 1989 through February 1990. Aggregated results are presented for all 1990 models combined and for passenger vehicles grouped by size and body style. Results are also presented for each individual series with at least 1,000 insured vehicle years of exposure. Sixty series, out of a total of more than 300 contained in the HLDI data base for 1990 models, had accumulated sufficient exposure to meet the reporting threshold; some 1990 models were introduced in the first half of calendar year 1989 (e.g., Chevrolet Lumina). Results for additional vehicle series will be reported subsequently as more exposure is accumulated.

The results presented are exposure (measured in insured vehicle years) and relative values for three quantities that summarize the collision losses: claim frequency per 100 insured vehicle years, average loss payment per claim, and average loss payment per insured vehicle year. The relative results are based on the following overall results for all 1990 models combined: for claim frequency results, 100 is equivalent to 10.1 claims per 100 insured vehicle years; for average loss payment per claim, 100 is equivalent to $2,252; and for average loss payment per insured vehicle year, 100 is equivalent to $228. For example, the relative claim frequency for the four-door Toyota Corolla of 91 indicates a frequency that is 9 percent lower than 10.1 (the result for all 1990 models combined). In contrast, the four-door Acura Integra's relative claim frequency of 122 is 22 percent higher than the 1990 overall claim frequency. (The overall results are discussed further on page 6 and are presented for comparison in Table 2.)

The results shown in Table 1 were standardized to minimize effects due to differences in the mix of operator age groups and deductible amounts among different vehicles. Both the frequency and average size of collision coverage losses vary with the deductible amount and the age group of the operators. Standardizing these two nonvehicle factors ensures that their mix is the same for each vehicle. It should be noted, however, that other nonvehicle factors could vary among different vehicles and that such factors could affect collision coverage loss experience. The standardization process is described in detail in Appendix B.

The individual series in Table 1 are listed by body style within car size group (small, midsize, large) in ascending order of their relative average loss payments per insured vehicle year. It should be noted that, in general, the greater the exposure associated with a result, the more confidence can be placed in it.

As has been the case with previous HLDI collision reports, there are large variations in loss experience among the individual series. The Buick Century, a

(Text continues on page 5.)

Table 1
Insurance Losses, Collision Coverages
1990 Models - Passenger Cars

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
All	**All**	**196,362**	**100 = 10.1**	**100 = $2,252**	**100 = $228**
		SMALL CARS			
Two-Door Models		**36,254**	**133**	**102**	**136**
Toyota	Tercel	1,141	120	56	66
Honda	Civic	1,953	116	83	97
Nissan	Sentra	2,283	124	98	121
Ford	Probe	1,937	109	111	121
Ford	Escort	2,422	121	107	129
Acura	Integra	4,750	137	99	136
Mitsubishi	Eclipse	6,586	138	100	138
Geo	Storm	1,269	143	98	140
Plymouth	Laser	5,079	137	107	146
Nissan	240SX	1,516	155	114	177
Toyota	Celica	1,434	156	130	203
Four-Door Models		**23,326**	**106**	**102**	**107**
Toyota	Corolla	2,211	91	100	91
Honda	Civic	3,560	114	82	94
Acura	Integra	2,684	122	91	111
Geo	Prizm	9,752	105	112	117
Mazda	323	1,243	110	118	129
Station Wagons/Passenger Vans		**1,926**	**83**	**103**	**86**
Sports & Specialty		**8,670**	**105**	**121**	**126**
Mazda	MX-5 Miata Conv.	4,162	87	96	84
Nissan	300ZX	2,701	124	167	208

Table 1 (cont'd)
Insurance Losses, Collision Coverages
1990 Models - Passenger Cars

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		MIDSIZE CARS			
Two-Door Models		**11,444**	**106**	**95**	**100**
Pontiac	Grand Am	1,719	87	78	67
Chevrolet	Cavalier	3,209	120	97	117
Chevrolet	Beretta	1,207	127	112	142
Four-Door Models		**53,852**	**87**	**91**	**79**
Buick	Century	1,643	57	61	35
Oldsmobile	Cutlass	1,140	92	55	51
Chevrolet	Lumina	10,550	82	74	60
Ford	Taurus	1,819	68	94	64
Ford	Tempo	2,339	87	87	76
Chevrolet	Corsica	1,880	104	76	80
Toyota	Camry	4,605	84	101	85
Mazda	626	1,585	87	99	86
Honda	Accord	8,328	97	90	88
Subaru	Legacy	2,109	99	91	90
Plymouth	Acclaim	1,362	94	98	91
Nissan	Maxima	2,835	101	97	97
Subaru	Legacy 4WD	1,256	108	106	114
Station Wagons/Passenger Vans		**7,689**	**92**	**96**	**88**
Subaru	Legacy	1,023	99	89	88
Subaru	Legacy 4WD	2,273	103	87	89
Nissan	Axxess	1,639	92	103	94
Sports & Specialty		**12,483**	**106**	**112**	**118**
Acura	Legend 4D	1,368	86	85	73
Ford	Mustang	1,390	141	116	163
Chevrolet	Camaro	1,166	136	125	169
Nissan	300ZX 2+2	1,091	111	155	172

Table 1 (cont'd)
Insurance Losses, Collision Coverages
1990 Models - Passenger Cars

Make	Series	Total Exposure (Insured Vehicle Years)	Relative Claim Frequency	Relative Average Loss Payment Per Claim	Relative Average Loss Payment Per Insured Vehicle Year
		LARGE CARS			
Two-Door Models		**3,165**	**105**	**95**	**99**
Ford	Thunderbird	1,554	106	94	100
Mercury	Cougar	1,445	108	93	100
Four-Door Models		**12,512**	**78**	**109**	**85**
Oldsmobile	Ninety-Eight	1,103	93	52	48
Buick	Electra	1,262	58	94	55
Chevrolet	Caprice	1,112	71	85	60
Buick	LeSabre	3,139	73	101	73
Mercury	Grand Marquis	1,915	87	89	77
Oldsmobile	Eighty-Eight	1,837	72	127	92
Pontiac	Bonneville	1,159	99	152	150
Station Wagons/Passenger Vans		**17,337**	**81**	**74**	**60**
Chevrolet	Astro Van	1,223	71	62	44
Plymouth	Grand Voyager	2,395	80	56	45
Dodge	Grand Caravan	2,347	82	64	52
Dodge	Caravan	2,782	78	74	58
Mazda	Wagon	1,008	104	61	64
Plymouth	Voyager	2,811	84	85	71
Ford	Aerostar	1,069	86	91	78
Sports & Specialty		**7,698**	**78**	**132**	**103**
Cadillac	DeVille 4D	1,711	96	95	91
Lincoln	Town Car	1,733	61	172	104
Lexus	LS 400	1,132	80	167	134

Series are ranked within group and subgroup by ascending average loss payment per insured vehicle year. Series with less than 1,000 insured vehicle years of exposure are not summarized.

Results are standardized to the distribution:

Deductible	Youthful Operator	No Youthful Operator
≤$200	5%	50%
≥$200	5%	40%

midsize four-door model, had the lowest relative average loss payment per insured vehicle year (35). Two passenger vans, the Chevrolet Astro Van and Plymouth Grand Voyager, and the large four-door Oldsmobile Ninety-Eight were the only other 1990 series with average loss payments per insured vehicle year less than half the overall combined 1990 result. At the other extreme, the Nissan 300ZX, a small sports model, had the highest relative average loss payment per insured vehicle year (208). The only other vehicle with a relative average loss payment per insured vehicle year more than double the average was the small two-door Toyota Celica (203).

The Oldsmobile Ninety-Eight had the lowest relative average loss payment per claim (52) and the Lincoln Town Car, a large specialty model, registered the highest (172). The Buick Century had the lowest relative claim frequency (57) and the Toyota Celica had the highest (156). Several passenger vehicles experienced significantly worse than average results in both claim frequency and average loss payment per claim. The Nissan 300 ZX, Toyota Celica, and Chevrolet Camaro all had results at least 20 percent above the overall result in both categories.

As noted in previous collision reports, even among vehicles of the same size and body style, there can be large variations in the collision coverage loss results for individual vehicle series. For example, among small two-door models, the relative results for claim frequency ranged from 109 to 156, for average loss payment per claim they ranged from 56 to 130, and for average loss payment per insured vehicle year they ranged from 66 to 203.

Comparison of 1989 and 1990 Model Year Overall Results

Table 2 compares the overall claim frequency, average loss payment per claim, and average loss payment per insured vehicle year for 1990 models during their initial exposure period with those of 1989 models during the same calendar period and for the corresponding period one year earlier. Because the comparisons of the initial results for 1990 models and those for 1989 models are for calendar periods that are one year apart, they could be influenced by differences not only between model years but also calendar periods. In comparisons based on results from the same calendar period, the 1989 vehicles would be an average of one year older than the 1990 vehicles, and the comparisons could be influenced by differences in the vehicle ages. For these reasons, two sets of results for the 1989 models are presented in Table 2. The initial 1989 results are based on the exposure period one year earlier than that of the second set of 1989 model results, which are based on the same exposure period as the 1990 model year results. The January 1989 through February 1990 results for 1989 models were separately adjusted to ensure that the contribution of exposure from each month was comparable to that for the 1990 models. The monthly adjustment procedure is described in detail in Appendix B. The overall results for 1989 and 1990 models during January 1989 through February 1990 show that for 1990 models the frequency of collision claims decreased by two percent, the average loss payment per claim increased by nine percent, and the average loss payment per insured vehicle year increased by seven percent.

Table 2
Overall Collision Coverage Loss Experience of 1990 Models Compared to 1989 Models

Loss Category	1989 Models		1990 Models	Percentage Change
	Jan. 1988-Feb. 1989	Jan. 1989-Feb. 1990	Jan. 1989-Feb. 1990	Jan. 1989-Feb. 1990
Claim Frequency Per 100 Insured Vehicle Years	10.1	10.3	10.1	-2
Average Loss Payment Per Claim	$2,132	$2,069	$2,252	+9
Average Loss Payment Per Insured Vehicle Year	$215	$213	$228	+7

APPENDIX A
Sources and Nature of Data

Both policy and claim related collision coverage data for 1990 model year vehicles in the calendar period January 1989 through February 1990 were used in the preparation of this report. Assigned risk, fleet policies, and all data from Massachusetts were excluded. Only payments for damage to insured automobiles were included; monies recovered from the salvage of wrecked vehicles were excluded, as were monies subsequently recovered by the companies through subrogation actions. Data for January 1989 through February 1990 were collected from the following companies: Aetna, Allstate, Fireman's Fund, Kemper, Liberty Mutual, Nationwide, Prudential, Safeco, State Farm, Travelers, and USAA.

Insurance Policy Data

Insurance policy data, as distinct from claim data, describe the characteristics of an insured vehicle, including its make and series and the nature of its collision coverage. Policy data used in this report included the following basic information:

- Vehicle Identification Number (VIN)[1]
- Deductible Amount[1]
- Rated Driver Characteristics[1]
- Date and Nature of Relevant Changes in Coverage

Insurance Claim Data

Insurance claim data report the characteristics of an insured vehicle for which a collision coverage claim is made, the initiation of the claim, and/or the corresponding payment. Claim data used in the report included the following basic information:

- Vehicle Identification Number (VIN)
- Crash Date
- Loss Payment Amount

The dollar amounts reported represented loss payments made to or on behalf of the policyholder for damage to the insured vehicle.

APPENDIX B
Method of Data Analysis

Vehicle Description and Identification

The Vehicle Identification Numbers (VINs) of most new automobiles sold in the United States are individually unique numbers that contain, in coded form, detailed information as to each vehicle's make, series, and other distinguishing characteristics.

The specific vehicle types for which results are presented in this report were derived from the VINs of the individual automobiles.

Only data with valid VINs were used for this report. Each VIN was decoded into a set of specific vehicle characteristics. For the purposes of this report the vehicle characteristics of primary concern were make, series, and vehicle size class (Appendix D). The use of VINs also permits analyses of other very specific vehicle characteristics, such as horsepower, body style, etc.

Exposure

Exposure, in insured vehicle years, was computed for each individual vehicle from the coverage data. The total number of insured vehicle years for each vehicle series was then obtained by accumulating the exposure for all of the individual vehicles of that vehicle series.

The exposure for each vehicle series was obtained for the four combinations of deductible amount and operator age group, a, b, c, d, shown below:

Deductible Amount	Youthful Operator	No Youthful Operator
≤$200	a	b
>$200	c	d

Claim Frequency

Both pending and paid claims for an individual vehicle were first matched with corresponding coverage data to ensure that the crash had occurred within an appropriate period of collision coverage for that vehicle. In every instance in which multiple claims were made for the same crash, they were treated as a single claim in the calculations of claim frequency. Claims that were settled without payment, as well as those paid even though the damage was less than the deductible amount, were excluded from the computations. All remaining claims for each vehicle series were used, together with the corresponding exposure, to compute the claim frequency: the number of claims per 100 insured vehicle years.

For each vehicle series, claim frequencies were computed for each of the four combinations of deductible and operator age group, a, b, c, d, shown in the diagram.

Average Loss Payment Per Claim

Paid claims for each vehicle series were used to compute its average loss payment per claim. They were summed and divided by the number of claims to produce the average loss payment per claim. Claims that were settled without payment, as well as those paid even though the damage was less than the deductible amount, were excluded from the computations. In every instance in which multiple claims and/or multiple payments were made for the same crash, they were treated as a single claim and/or single payment in the calculation of average loss payment.

Average loss payments per claim were also obtained for each combination of deductible amount and operator age group.

Average Loss Payment Per Insured Vehicle Year

The average loss payment per insured vehicle year for each vehicle series was obtained by multiplying the claim frequency per 100 insured vehicle years by the average loss payment per claim, and dividing the result by 100.

Average loss payments per insured vehicle year were also obtained for each combination of deductible amount and operator age group.

Standardization

It is well known that loss experience can vary substantially in relation to certain nonvehicle factors. Two important such factors are the deductible amount of the coverage and the operator age group; both claim frequency and average loss payment vary with these factors. In the case of the operator age group, youthful operators generally generate higher insurance losses than older drivers. Thus, if compared vehicles have different proportions of youthful operators, this difference, if not taken into consideration, would be sufficient to bias the comparison. Results obtained from the two deductible categories, less than or equal to $200 and greater than $200, also vary. For example, average loss payments for the higher deductibles are greater than those for the lower deductibles. Again, if compared vehicles have different proportions of lower deductible coverages, this difference, if not taken into consideration, would also be sufficient to bias the comparison.

To minimize any biases in the comparison of results that could arise because of differences attributable to variations among different vehicles in deductible amount and operator age groups, results were first adjusted or standardized so as to equalize the effects of the two nonvehicle factors in the standardized results. In this procedure, a weighted average of the actual results for each combination of deductible amount and operator age group was computed using the standardization weights shown in the table below. Because the same weights were always used, the effects due to the nonvehicle factors were present in equal amounts in the standardized results. Therefore, to the extent that the age distributions within each operator age group and the deductible distributions within each deductible group do not vary substantially for different vehicles, these effects can no longer bias comparisons of results.

The standardization procedure employed is widely used in health statistics.[2] The basic principle of the method is the introduction of a selected population with a standard distribution across the combinations of deductible amount and operator age group as represented by the standardization weights in the table.

STANDARDIZATION WEIGHTS

Deductible Amount	Operator Age Group: Youthful Operator	No Youthful Operator	Combined
≤$200	0.05	0.50	0.55
>$200	0.05	0.40	0.45
Combined	0.10	0.90	1.00

Mathematical Description of Standardization Procedure

The standardization procedure can be represented mathematically as follows:

Deductible Amount	Operator Age Group: Youthful Operator	No Youthful Operator	Combined
≤$200	X_{11}	X_{12}	$X_{1.}$
>$200	X_{21}	X_{22}	$X_{2.}$
Combined	$X_{.1}$	$X_{.2}$	$X_{..}$

where,

X_{ij} represents a computed claim frequency for a particular vehicle series with respect to the deductible amount i and age group j, and

i = 1 for deductibles ≤ $200 and 2 for deductibles > $200,

j = 1 for youthful operator group and 2 for no youthful operator group,

$X_{.j}$ represents the computed claim frequency for all deductibles combined for age group j,

$X_{i.}$ represents the computed claim frequency for both operator age groups combined for deductible amount group i, and,

$X_{..}$ represents the computed claim frequency for all deductibles and both age groups combined.

Now, if weights are defined as follows:

Deductible Amount	Operator Age Group: Youthful Operator	No Youthful Operator	Combined
≤$200	W_{11}	W_{12}	$W_{11} + W_{12}$
>$200	W_{21}	W_{22}	$W_{21} + W_{22}$
Combined	$W_{11} + W_{21}$	$W_{12} + W_{22}$	1

where $W_{11} + W_{21} + W_{12} + W_{22} = 1$,

then the standardized claim frequency for the particular vehicle series is:

$$W_{11}X_{11} + W_{21}X_{21} + W_{12}X_{12} + W_{22}X_{22},$$

and, if A_{ij} represents the computed average loss payment per claim for a particular vehicle series, then the standardized average loss payment per claim is:

$$\frac{W_{11}X_{11}A_{11} + W_{21}X_{21}A_{21} + W_{12}X_{12}A_{12} + W_{22}X_{22}A_{22}}{W_{11}X_{11} + W_{21}X_{21} + W_{12}X_{12} + W_{22}X_{22}}$$

The standardized average loss payment per insured vehicle year is obtained by multiplying the standardized claim frequency by the standardized average loss payment and dividing by 100.

Similarly, it is possible to standardize within a deductible category or within an operator age group by using the appropriate combined weights. The

standardized claim frequency for youthful operators, for example, would be:

$$(W_{11} + W_{12})X_{11} + (W_{21} + W_{22})X_{21},$$

and the standardized claim frequency for deductibles greater than $200 would be:

$$(W_{11} + W_{21})X_{21} + (W_{12} + W_{22})X_{22}.$$

These latter standardizations, using the combined weights, enable valid comparisons to be made between the results for different deductible groups or between the results for different operator age groups without the effects of the other factor biasing the comparisons.

Example

For the 1990 Toyota Tercel two-door, the four claim frequencies were:

$$X_{11} = 29.0 \quad X_{12} = 11.4 \quad X_{21} = 19.4 \quad X_{22} = 10.0$$

and the weights were:

$$W_{11} = 0.05 \quad W_{12} = 0.50 \quad W_{21} = 0.05 \quad W_{22} = 0.40$$

The standardized claim frequency was:

$$(0.05)(29.0) + (0.50)(11.4) + (0.05)(19.4) + (0.40)(10.0) = 12.1.$$

Monthly Exposure Adjustment

To compare the results from new model year cars during their initial period of availability with the corresponding results from the previous model year's cars, it is necessary to adjust the latter results because of differences in the mix of exposure by month that contribute to that result. For 1990 models, exposure in each successive month increases as more of the new model cars are sold, and therefore there is more exposure from the later months than from the earlier months. For this same period, nearly all of the 1989 cars are on the road so that exposure in each month is essentially the same.

The effects of this difference in exposure can be removed by standardizing the monthly proportions of exposure in the results for the two model years. In the adjustment employed, results for the 1989 models were adjusted to have the monthly mix of exposure corresponding to the 1990 models, as shown in the following table.

MONTHLY ADJUSTMENT WEIGHTS

Jan.-June	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
0.01	0.01	0.02	0.03	0.06	0.11	0.18	0.26	0.32

Analogous to the earlier discussion of the standardization procedure for age and deductible amount, let

- X_m represent a computed claim frequency adjusted for deductible amount and age in month m for a particular 1989 vehicle series, and
- W_m represent the monthly adjustment weights cited in the preceding table.

Thus, the standardized claim frequency adjusted for monthly exposure is:

$$\Sigma W_m X_m.$$

Similarly, if A_m represents the computed average loss payment per claim adjusted for deductible amount and age in month m for a particular 1989 vehicle series, then the standardized average loss payment per claim is:

$$\frac{\Sigma W_m X_m A_m}{\Sigma W_m X_m}.$$

Thus, using these weights, weighted averages of standardized monthly claim frequency and average loss payment per claim results were computed for 1989 model year cars. Recall that the standardized average loss payment per insured vehicle year is then obtained by multiplying the standardized claim frequency by the standardized average loss payment per claim and dividing by 100. The results thus obtained are both standardized for age and deductible and adjusted for monthly exposure differences.

An assumption made in computing a standardized and adjusted result is that exposure in each month is independent of the factors deductible amount and operator age group. This assumption is valid because

the distributions of exposure by deductible amount and operator age group are approximately the same for each month.

1. See Appendix C for Definitions.
2. For example, see Armitage, P. *Statistical Methods in Medical Research*, Wiley, New York (1971).

APPENDIX C
Definitions

Average Loss Payment Per Claim -- The total of all loss payments made for the claims for a group of vehicles, divided by the number of claims paid.

Average Loss Payment Per Insured Vehicle Year -- For a group of vehicles, the product of Claim Frequency and Average Loss Payment Per Claim, expressed as dollars per insured vehicle year. It should be noted that this definition differs from the commonly used insurance term, pure premium, but yields similar results.

Claim Frequency -- The number of claims for a group of vehicles, divided by the exposure for that group.

Collision Coverages -- As defined in insurance contracts, the coverage under which people insure their own vehicle against loss caused by collision.

Deductible Amount -- That portion of the collision damage cost borne by the policyholder. For computing results, deductible amounts are split into two groups: less than or equal to $200 (mainly $100 and $200 deductibles) and greater than $200 (mainly $250 and $500 deductibles).

Exposure -- The time interval an individual vehicle is insured. Exposure for a group of vehicles is expressed in units of insured vehicle years.

Loss Payment -- That portion of the collision damage cost borne by the insurer; in general, the total collision damage cost minus the deductible amount.

Operator Age Group -- The factor which distinguishes those vehicles whose rated driver is youthful from those vehicles whose rated driver is not youthful (see Youthful Operator).

Rated Driver -- The driver who, for insurance purposes, is considered to represent the greatest loss potential for the insured vehicle.

Vehicle Identification Number (VIN) -- A code, variously comprising both numbers and letters; normally, 8 to 17 characters in length, assigned to each vehicle by its manufacturer. The VIN uniquely identifies the vehicle within at least a ten-year time span and, in recent model year vehicles, contains coding which identifies the make, series, model year, and other characteristics of each vehicle.

Vehicle Classifications -- There are four major body style groupings of passenger cars - regular two-door models, regular four-door models, station wagons and passenger vans, and sports and specialty models. Sports and specialty models include all two-seater cars, all convertibles, all midsize and large cars with two or fewer designated rear seating positions, and all luxury cars. Body styles are divided into size classes based on wheelbase (rounded to the nearest inch) defined as follows:

Small -- Vehicles with wheelbases less than or equal to 99 inches.

Midsize -- Vehicles with wheelbases greater than 99 inches and less than or equal to 109 inches.

Large -- Vehicles with wheelbases greater than 109 inches.

Vehicle Series -- A name denoting a family of vehicles, within a make, with the same wheelbase and a degree of commonality in construction such as body, chassis, etc.

Youthful Operator -- For the purposes of this report, all males (married or single) under 25 years of age and all unmarried females under 25 years of age.

APPENDIX D
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Acura	Small	Integra	2 DR	96.5	RS, LS, GS
		Integra	4 DR	99.2	RS, LS, GS
	Midsize	Legend 2D	SP	106.5	LS, L
		Legend 4D	SP	108.7	LS, L
Alfa Romeo	Small	Spider Conv.	SP	88.6	Veloce, Graduate, Quadrifoglio
Audi	Midsize	Coupe Quattro 4WD	SP	100.4	
		V8 Quattro 4D 4WD	SP	106.4	
		100 Quattro 4WD	SP	105.9	
		100 4D	SP	105.6	
		200 Quattro SW 4WD	SP	105.7	
		200 Quattro 4D 4WD	SP	105.9	
		200 4D	SP	105.6	
		80 4D	SP	100.2	
		80 Quattro 4WD	SP	99.9	
		90 4D	SP	100.2	
		90 Quattro 4WD	SP	99.9	
Avanti	Midsize	Avanti Conv.	SP	109.0	
		Avanti 2D	SP	109.0	
	Large	Avanti 4D	SP	116.0	
Bentley	Large	Continental Conv.	SP	120.5	
		Eight	SP	120.5	
		Mulsanne	SP	120.5	
		Turbo R	SP	120.5	
BMW	Midsize	M3	SP	101.0	
		325i Conv.	SP	101.2	
		325i 2D	SP	101.2	
		325i 4D	SP	101.2	
		325iX 2D 4WD	SP	101.2	
		325iX 4D 4WD	SP	101.2	
		525i	SP	108.7	
		535i	SP	108.7	
	Large	735i	SP	111.5	
		735iL	SP	116.0	
		750iL	SP	116.0	
Buick	Small	Reatta	SP	98.5	
		Reatta Conv.	SP	98.5	

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Buick (cont'd)	Midsize	Century	2 DR	104.8	Custom
		Century	4 DR	104.8	Custom, Limited
		Century	SW	104.8	Custom, Estate
		Regal	2 DR	107.5	Custom, Limited
		Regal	4 DR	107.5	Custom, Limited
		Riviera	SP	108.0	
		Skylark	2 DR	103.4	Custom, Gran Sport
		Skylark	4 DR	103.4	Custom, Luxury Edition
	Large	Electra	4 DR	110.8	Limited, Park Avenue, T Type, Park Avenue Ultra
		Estate Wagon	SW	115.9	
		LeSabre	2 DR	110.8	Custom, Limited
		LeSabre	4 DR	110.8	Custom, Limited
Cadillac	Small	Allante Conv.	SP	99.4	
	Midsize	Eldorado	SP	108.0	
		Seville	SP	108.0	Touring
	Large	Brougham	SP	121.5	
		DeVille 2D	SP	110.8	
		DeVille 4D	SP	113.8	
		Fleetwood 2D	SP	110.8	
		Fleetwood 4D	SP	113.8	Sixty Special
Chevrolet/ Geo	Small	Corvette	SP	96.2	ZR1
		Corvette Conv.	SP	96.2	ZR1
		Metro	2 DR	89.2	LSI
		Metro	4 DR	93.1	LSI
		Metro Conv.	SP	89.2	
		Prizm	4 DR	95.7	GSI
		Sprint	2 DR	88.4	
		Sprint	4 DR	92.3	
		Storm	2 DR	96.5	GSI
	Midsize	Beretta	2 DR	103.4	GTZ
		Beretta Conv.	SP	103.4	
		Camaro	SP	101.0	RS, IROC-Z
		Camaro Conv.	SP	101.0	RS, IROC-Z
		Cavalier	2 DR	101.2	Z24
		Cavalier	4 DR	101.2	
		Cavalier	SW	101.2	
		Celebrity	SW	104.9	
		Corsica	4 DR	103.4	LTZ, LT
		Lumina	2 DR	107.5	Eurosport
		Lumina	4 DR	107.5	Eurosport

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Chevrolet/ Geo (cont'd)	Large	Astro Extended Van	PV	111.0	
		Astro Extended Van 4WD	PV	111.0	
		Astro Van	PV	111.0	
		Astro Van 4WD	PV	111.0	
		Caprice	4 DR	116.0	Classic, Brougham
		Caprice	SW	116.0	Classic
		Lumina APV	PV	109.8	
Chrysler	Small	Daytona	2 DR	97.0	ES, Shelby
		TC Conv.	SP	93.0	
	Midsize	Dynasty	4 DR	104.3	LE
		Imperial	4 DR	109.3	
		LeBaron	2 DR	100.3	GT, GTC
		LeBaron	4 DR	103.3	
		LeBaron Conv.	SP	100.4	GT, GTC
		New Yorker	4 DR	104.3	Salon, Landau
		New Yorker 5th Ave	4 DR	109.3	
	Large	Town & Country	PV	119.0	
Daihatsu	Small	Charade	2 DR	92.1	SE, SX
		Charade	4 DR	92.1	SE, SX
Dodge	Small	Daytona	2 DR	97.0	ES, Shelby
		Omni	4 DR	99.1	
		Shadow	2 DR	97.0	America
		Shadow	4 DR	97.0	America
	Midsize	Dynasty	4 DR	104.3	LE
		Monaco	4 DR	106.0	ES, LE
		Spirit	4 DR	103.3	ES, LE
	Large	Caravan	PV	112.0	SE, LE
		Grand Caravan	PV	119.0	SE, LE
Dodge/ Mitsubishi	Small	Colt	2 DR	94.0	GT, GL
		Colt	SW	93.7	DL
		Colt 4WD	SW	93.8	DL
	Midsize	Colt Vista	SW	103.3	Vista
		Colt Vista 4WD	SW	103.5	Vista

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Eagle	Small	Summit	4 DR	96.7	LX, ES
		Talon	2 DR	97.2	TSI
		Talon 4WD	2 DR	97.2	TSI
	Midsize	Premier	4 DR	106.0	LX, ES
Ferrari	Small	F40	2 DR	96.5	
		348 TB	2 DR	96.5	
		348 TS	2 DR	96.5	
	Midsize	Mondial	SP	104.3	
		Mondial Conv.	SP	104.3	Cabriolet
		Testarossa	SP	100.4	
Ford	Small	Escort	2 DR	94.2	GT, LX, Pony
		Escort	4 DR	94.2	LX
		Escort	SW	94.2	LX
		Festiva	2 DR	90.2	L, LX, L Plus
		Probe	2 DR	99.0	GT, GL, LX
	Midsize	Mustang	SP	100.5	GT, LX
		Mustang Conv.	SP	100.5	GT, LX
		Taurus	4 DR	106.0	L, GL, LX, SHO
		Taurus	SW	106.0	L, GL, LX
		Tempo	2 DR	99.9	L, GL, GLS
		Tempo	4 DR	99.9	L, GL, LX, GLS
		Tempo 4WD	2 DR	99.9	
		Tempo 4WD	4 DR	99.9	
	Large	Aerostar	PV	118.9	
		Aerostar 4WD	PV	118.9	
		Aerostar Extended	PV	118.9	
		Aerostar Extended 4WD	PV	118.9	
		Crown Victoria	4 DR	114.3	LX
		Country Squire	SW	114.3	LX
		Thunderbird	2 DR	113.0	LX, Super
GMC	Large	Safari Extended Van	PV	111.0	
		Safari Extended Van 4WD	PV	111.0	
		Safari Van	PV	111.0	
		Safari Van 4WD	PV	111.0	
Honda	Small	Civic	2 DR	98.4	DX, Si
		Civic	4 DR	98.4	DX, LX, EX
		Civic	SW	98.4	Wagovan
		Civic CRX	SP	90.6	HF, Si
		Civic 4WD	SW	98.4	
	Midsize	Accord	2 DR	107.1	DX, LX, EX
		Accord	4 DR	107.1	DX, LX, EX
		Prelude	2 DR	101.0	2.0 S, 2.0 Si

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Hyundai	Small	Excel	2 DR	93.9	GL, GLS
		Excel	4 DR	93.9	GL, GLS
	Midsize	Sonata	4 DR	104.3	GL, GLS
Infiniti	Midsize	M30	SP	103.0	
	Large	Q45	SP	113.2	
Isuzu	Small	Impulse	2 DR	96.5	
		Stylus	4 DR	96.5	
Jaguar	Midsize	XJ-S	SP	102.0	Collection Rouge
		XJ-S Conv.	SP	102.0	
	Large	XJ6	SP	113.0	VDP, VDP Majestic, Sovereign
Lexus	Midsize	ES 250	SP	102.4	
	Large	LS 400	SP	110.8	
Lincoln	Midsize	Continental	SP	109.0	Signature
		Mark VII	SP	108.5	LSC, Blass
	Large	Town Car	SP	117.4	Cartier, Signature
Lotus	Small	Esprit Turbo	SP	97.8	
Maserati	Small	Spyder Conv.	SP	94.4	
	Midsize	228	SP	102.4	
		430	SP	102.4	
Mazda	Small	MX-5 Miata Conv.	SP	89.2	
		MX-6	2 DR	99.0	Turbo
		RX-7	SP	95.7	Turbo
		RX-7 Conv.	SP	95.7	
		323	2 DR	96.5	
		323	4 DR	98.4	Protege
		323 4WD	4 DR	98.4	Protege
	Midsize	626	4 DR	101.4	Turbo
		929	4 DR	106.7	
	Large	MPV	PV	110.4	
		MPV 4WD	PV	110.4	
Mercedes-Benz	Small	300SL Conv.	SP	99.0	
		500SL Conv.	SP	99.0	
	Midsize	190E	SP	104.9	
		300CE	SP	106.9	

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Mercedes-Benz (cont'd)	Large	300E	SP	110.2	2.6L
		300E 4Matic 4WD	SP	110.2	
		300SE	SP	115.6	
		300SEL	SP	121.1	
		300TE	SP	110.2	
		300TE 4Matic 4WD	SP	110.2	
		350SDL	SP	121.1	
		420SEL	SP	121.1	
		560SEC	SP	112.2	
		560SEL	SP	121.1	
Mercury	Midsize	Sable	4 DR	106.0	GS, LS
		Sable	SW	106.0	GS, LS
		Topaz	2 DR	99.9	L, GS, XR5
		Topaz	4 DR	99.9	L, GS, LS, LTS
	Large	Cougar	2 DR	113.0	XR-7, LS
		Grand Marquis	4 DR	114.3	GS, LS
		Colony Park	SW	114.3	GS, LS
Mitsubishi	Small	Eclipse	2 DR	97.2	GS
		Eclipse 4WD	2 DR	97.2	GSX
		Mirage	2 DR	93.9	RS, VL
		Mirage	4 DR	96.7	RS
		Precis	2 DR	93.8	RS, GLS
		Wagon	PV	88.0	LS
	Midsize	Galant	4 DR	102.4	LS, GS
		Galant 4WD	4 DR	102.4	GSX
		Sigma	4 DR	102.4	L, LS
Nissan	Small	Pulsar	2 DR	95.7	XE
		Sentra	2 DR	95.7	XE, SE
		Sentra	4 DR	95.7	XE
		Sentra	SW	95.7	XE
		Van	PV	92.5	XE, GXE
		240SX	2 DR	97.4	XE, SE
		300ZX	SP	96.5	Turbo
	Midsize	Axxess	SW	102.8	XE, SE
		Axxess 4WD	SW	102.4	XE, SE
		Maxima	4 DR	104.3	GXE, SE
		Stanza	4 DR	100.4	XE, GXE
		300ZX 2+2	SP	101.2	
Oldsmobile	Midsize	Calais	2 DR	103.4	S, SL, International
		Calais	4 DR	103.4	S, SL, International
		Cutlass Supreme	2 DR	107.5	SL, International
		Cutlass Supreme	4 DR	107.5	SL, International
		Cutlass Supreme Conv.	SP	107.5	

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Oldsmobile (cont'd)		Cutlass Ciera	2 DR	104.9	S, SL, International
		Cutlass Ciera	4 DR	104.9	S, SL, International
		Cutlass Ciera	SW	104.9	Cruiser, Cruiser SL
		Toronado	SP	108.0	Trofeo
	Large	Custom Cruiser	SW	115.9	
		Eighty-Eight	2 DR	110.8	Royale, Royale Brougham
		Eighty-Eight	4 DR	110.8	Royale, Royale Brougham
		Ninety-Eight	4 DR	110.8	Regency, Regency Brougham, Touring Sedan
		Silhouette Van	PV	109.8	
Peugeot	Midsize	405	4 DR	105.1	DL, S, Mi16
		405	SW	105.1	DL, S
		505	4 DR	108.0	S, 2.2i
	Large	505	SW	114.2	DL, SW8, Turbo
Plymouth	Small	Horizon	4 DR	99.1	
		Laser	2 DR	97.2	RS
		Sundance	2 DR	97.0	America
		Sundance	4 DR	97.0	America
	Midsize	Acclaim	4 DR	103.3	LE, LX
	Large	Grand Voyager	PV	119.0	SE, LE
		Voyager	PV	112.0	SE, LE
Plymouth/ Mitsubishi	Small	Colt	2 DR	94.0	GT, GL
		Colt	SW	93.7	DL
		Colt 4WD	SW	93.8	DL
	Midsize	Colt Vista	SW	103.3	Vista
		Colt Vista 4WD	SW	103.5	Vista
Pontiac	Small	Firefly	2 DR	89.2	LE/Turbo
		Lemans	2 DR	99.2	GSE, Aero
		Lemans	4 DR	99.2	SE
	Midsize	Firebird	SP	101.0	Trans Am, GTA
		Grand Am	2 DR	103.4	LE, SE
		Grand Am	4 DR	103.4	LE, SE
		Grand Prix	2 DR	107.5	LE, SE, Turbo
		Grand Prix	4 DR	107.5	LE, STE
		Sunbird	2 DR	101.2	LE, SE, GT
		Sunbird	4 DR	101.2	LE
		Sunbird Conv.	SP	101.2	LE
		6000	4 DR	104.9	LE, SE
		6000	SW	104.9	LE, SE

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Pontiac (cont'd)	Large	Bonneville	4 DR	110.8	LE, SE, SSE
		Parisienne	4 DR	116.0	Brougham
		Parisienne	SW	116.0	Safari
		Trans Sport Van	PV	109.9	
Porsche	Small	911 Carrera 2 Coupe	SP	89.4	
		911 Carrera 4 Coupe 4WD	SP	89.4	
		911 Carrera 2 Targa	SP	89.4	
		911 Carrera 4 Targa 4WD	SP	89.4	
		911 Carrera 2 Conv.	SP	89.4	
		911 Carrera 4 Conv. 4WD	SP	89.4	
		928 Coupe	SP	98.4	
		944 Conv.	SP	94.5	
		944 Coupe	SP	94.5	
Rolls Royce	Large	Corniche Conv.	SP	120.5	
		Silver Spirit	SP	120.5	
		Silver Spur	SP	124.0	
Saab	Small	900	2 DR	99.1	S, Turbo
		900	4 DR	99.1	S, Turbo
		900 Conv.	SP	99.1	Turbo
	Midsize	9000	SP	105.1	S, Turbo, CD
Sterling	Midsize	Sterling 827	SP	108.6	SL, SLI, S/SI
Subaru	Small	Justy	2 DR	90.0	DL, GL
		Justy 4WD	2 DR	90.0	GL
		Justy 4WD	4 DR	90.0	GL
		Loyale	2 DR	97.2	
		Loyale	4 DR	97.2	Turbo
		Loyale	SW	97.0	Turbo, Touring
		Loyale 4WD	2 DR	97.2	RS, RS Turbo
		Loyale 4WD	4 DR	97.0	Turbo
		Loyale 4WD	SW	96.9	Turbo, Touring
		XT Coupe	2 DR	97.0	GL, XT6
		XT Coupe 4WD	2 DR	97.0	XT6
	Midsize	Legacy	4 DR	101.6	L, LS, LS Special
		Legacy	SW	101.6	L, LS, LS Special, L Touring
		Legacy 4WD	4 DR	101.6	L, LS, LS Special
		Legacy 4WD	SW	101.6	L, LS, LS Special, L Touring
Suzuki	Small	Swift	2 DR	89.2	GA, GL, GS, GT
		Swift	4 DR	93.1	GA, GL, GS

APPENDIX D (Cont'd)
1990 Vehicle Series Designations

Make Name	Vehicle Size Class	Series Name	Body Style	Wheel Base	Models Included
Toyota	Small	Celica	2 DR	99.4	ST, GT, GT-S
		Celica All-Trac 4WD	2 DR	99.4	Turbo
		Corolla	2 DR	95.7	SR5, GT-S
		Corolla	4 DR	95.7	Deluxe, LE
		Corolla	SW	95.7	Deluxe
		Corolla All-Trac 4WD	4 DR	95.7	Deluxe
		Corolla All-Trac 4WD	SW	95.7	Deluxe, SR5
		Tercel	2 DR	93.7	Deluxe, EZ
	Midsize	Camry	4 DR	102.4	Deluxe, LE
		Camry	SW	102.4	Deluxe, LE
		Camry All-Trac 4WD	4 DR	102.4	Deluxe, LE
		Camry All-Trac 4WD	SW	102.4	Deluxe
		Cressida	4 DR	105.5	
		Supra	SP	102.2	Turbo
Volkswagen	Small	Cabriolet Conv.	SP	94.5	Bestseller, Boutique
		Corrado	2 DR	97.3	
		Fox	2 DR	92.8	GL
		Fox	4 DR	92.8	GL
		Fox	SW	92.8	GL
		Golf	2 DR	97.3	GL
		Golf	4 DR	97.3	GL
		GTI	2 DR	97.3	16V, 8V
		Jetta	2 DR	97.3	GL
		Jetta	4 DR	97.3	GL, GLI, GL/CARAT
		Vanagon	PV	96.9	GL/CARAT
	Midsize	Passat	4 DR	103.3	GL
		Passat	SW	103.3	GL
Volvo	Midsize	240	4 DR	104.0	DL
		240	SW	104.0	DL
		740 SW	SP	109.0	GL, GLE, Turbo
		740 4D	SP	109.0	GL, GLE, Turbo
		760 SW	SP	109.0	Turbo
		760 4D	SP	109.0	GLE, Turbo
		780	SP	109.0	Turbo
Yugo	Small	Yugo	2 DR	84.7	GV
		Yugo Conv.	SP	84.7	GV

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A-25 *Relationships Between Losses and Vehicle Density, 1982-84 Models,* October 1985.

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Economy Fire and Casualty Company Empire Insurance Company Employers Insurance of Wausau Employers Mutual Casualty Company Erie Insurance Exchange Farm Bureau Mutual Insurance Company Inc. of Kansas Farm Bureau Mutual Insurance Company of Idaho Farm Bureau Mutual Insurance Company of Iowa Farm Bureau Mutual Insurance Company of Nebraska Farmers & Merchants Insurance Company Farmers Automobile Association of Pekin Illinois Farmers Insurance Company Inc. Farmers Insurance Company of Arizona Farmers Insurance Company of Idaho Farmers Insurance Company of Oregon Farmers Insurance Company of Washington Farmers Insurance Exchange Farmers Insurance of Columbus Inc. Farmers Mutual Insurance Company of Nebraska Farmers Texas County Mutual Insurance Company Farmington Casualty Company Farmland Mutual Insurance Company Federal Insurance Company Federal Kemper Insurance Company The Fidelity & Casualty Company of New York Fidelity and Deposit Company of Maryland Fidelity & Guaranty Insurance Company Fidelity & Guaranty Insurance Underwriters Inc. Firemen's Insurance Company of Newark First Fire and Casualty Insurance of Hawaii Inc. First Indemnity Insurance of Hawaii Inc. First Insurance Company of Hawaii Ltd. First National Insurance Company of America Foundation Reserve Insurance Company Inc. GEICO General Insurance Company GEICO Indemnity Company General Accident Insurance Company of America General Insurance Company of America The Glens Falls Insurance Company Globe Indemnity Company Gothaer Insurance Company Government Employees Insurance Company Great Northern Insurance Company Great West Casualty Company Green Mountain Insurance Company Inc. Grinnell Mutual Reinsurance Company Guaranty National Insurance Company Halcyon Insurance Company Harbor Insurance Company Harleysville Mutual Insurance Company Hartford Accident and Indemnity Company Hartford Casualty Insurance Company Hartford Fire Insurance Company Hartford Insurance Company of Connecticut Hartford Insurance Company of Illinois Hartford Insurance Company of the Midwest Hartford Insurance Company of the Southeast IDS Property Casualty Insurance Company Illinois Employers Insurance of Wausau Illinois Farmers Insurance Company Indemnity Insurance Company of North America Indiana Farmers Mutual Insurance Company Insurance Company of North America John Deere Insurance Company Kansas City Fire and Marine Insurance Company Kentucky Central Insurance Company KFB Insurance Company Inc. League General Insurance Company Liberty Insurance Corporation Liberty Mutual Fire Insurance Company Liberty Mutual Insurance Company Liberty Northwest Insurance Corporation London Assurance Lumbermens Mutual Casualty Company Maine Bonding and Casualty Company Maryland Casualty Company Mayflower Insurance Company Ltd. Merastar Insurance Company Merit Insurance Company Metropolitan Property and Liability Insurance Company Michigan Education Employees Mutual Insurance Company Michigan Mutual Insurance Company Mid-Century Insurance Company Mid-Century Insurance Company of Texas Middlesex Mutual Assurance Company Midwest Mutual Insurance Company Montgomery Mutual Insurance Company Motor Club Insurance Association of Nebraska Motor Club of America Insurance Company Motors Insurance Corporation National-Ben Franklin Insurance Company of Illinois National Casualty Company National Fire Insurance Company of Hartford National General Fire & Casualty Company National General Insurance Company of Missouri National Grange Mutual Insurance Company National Standard Insurance Company Nationwide Agribusiness Insurance Company Nationwide General Insurance Company Nationwide Indemnity Insurance Company Nationwide Mutual Fire Insurance Company Nationwide Mutual Insurance Company Nationwide Property and Casualty Insurance Company New York Underwriters Insurance Company Newark Insurance Company Niagara Fire Insurance Company North Carolina Farm Bureau Mutual Insurance Company North Pacific Insurance Company Northbrook Indemnity Company Northbrook National Insurance Company Northbrook Property and Casualty Insurance Company Northern Insurance Company of New York Northwestern Pacific Indemnity Company Nutmeg Insurance Company Oklahoma Farm Bureau Mutual Insurance Company Oregon Automobile Insurance Company Pacific Employers Insurance Company Pacific Indemnity Company Pacific Insurance Company Pacific Insurance Company Ltd. 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SECURA Insurance Selective Insurance Company of America Selective Insurance Company of the Southeast Selective Way Insurance Company Sentinel Insurance Company Ltd. Shelter General Insurance Company Shelter Mutual Insurance Company Shield Insurance Company Southern Guaranty Insurance Company Southern Heritage Insurance Company Standard Fire Insurance Company State Auto Insurance Company State Farm County Mutual Insurance Company of Texas State Farm Fire and Casualty Company State Farm General Insurance Company State Farm Mutual Automobile Insurance Company St. Paul Fire and Casualty Insurance Company St. Paul Fire & Marine Insurance Company St. Paul Guardian Insurance Company St. Paul Indemnity Insurance Company St. Paul Insurance Company St. Paul Insurance Company of Illinois St. Paul Insurance Company of North Dakota St. Paul Lloyds Insurance Company St. Paul Mercury Insurance Company St. Paul Property and Casualty Insurance Company Sun Insurance Office Ltd. Texas Employers' Insurance Association Texas Farmers Insurance Company Texas Pacific Indemnity Company Transamerica Indemnity Company Transamerica Insurance Company Transamerica Insurance Company of Michigan Transamerica Insurance Company of Texas Transamerica Insurance Corporation of America Transamerica Premier Insurance Company Transamerica Specialty Insurance Company Transcontinental Insurance Company Transportation Insurance Company Travelers Indemnity Company Travelers Indemnity Company of America Travelers Indemnity Company of Illinois Travelers Indemnity Company of Rhode Island Travelers Insurance Company Truck Insurance Exchange Twin City Fire Insurance Company United Services Automobile Association United States Fidelity and Guaranty Company USAA Casualty Insurance Company Utica Mutual Insurance Company Valiant Insurance Company Valley Forge Insurance Company Vigilant Insurance Company Wausau Underwriters Insurance Company